TIFFIN
MOTORHOMES

MADE TO MOVE YOU.

ALLEGRO

2015 Breeze

OWNER'S MANUAL

Tiffin Motorhomes, Inc.
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Phone: 256-356-8661
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ALLEGRO Breeze

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DISCLAIMER

Many of the features and appliances described in this manual may or may not be reflected in the actual motorhome purchased, depending on the options and models selected by the motorhome owner. All items, materials, instructions, and guidance described in this manual are as accurate as possible at the time of printing. However, due to Tiffin Motorhomes' ongoing and dedicated commitment to excellence, improvement of Tiffin's motor homes is a continuing process. Consequently, Tiffin Motorhomes reserves the right to make substitutions and improvements in its makes and models of motor homes without prior notification. Substitutions of comparable or better materials, finishes, appliances, instrumentation, and instruction may be made at any time it is deemed prudent to provide the customer with the best possible motorhome meeting the customer's requirements.

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GENERAL INFORMATION

Chapter

1

ALLEGRO Breeze

WELCOME TO A LIFE OF "ROUGHING IT SMOOTHLY"

Tiffin Motorhomes is excited that you have entered the world of motorhome travel and we believe that you and your family will enjoy this way of life for years to come.Your Tiffin built motorhome provides all the luxuries and comforts of home while allowing you to travel freely as you choose.
But before heading out on the open roads, please make yourself familiar with this owner's manual to learn more about the operations of your motorhome. Also, please work with your dealer to learn as much as possible about the functionality and features of your coach. And remember - ***"wherever you go, we go."***

ABOUT THIS MANUAL

This operator/owner's manual was prepared with you in mind.
We want to provide you with the information you need to properly care for and use your vehicle and equipment. Please carefully read through this manual to help you understand how everything in your motorhome works.

NOTE: This operator's manual describes many features of your Allegro Breeze and includes instructions for its safe use. The manual, however, including its photography and illustrations, is of a general nature. Some equipment and features described in this manual may be optional or unavailable on your model.
The instructions included are meant to serve as a guide and in no way extend the responsibilities of Tiffin Motorhomes beyond the standard written warranty. The descriptions, illustrations, and specifications in this manual were correct at the time of printing and Tiffin Motorhomes reserves the right to change specifications or design without notice, and without incurring obligation to install the same on products previously manufactured.
Many of the instruction sheets and manuals for the various appliances inside your motorhome have been incorporated into this manual for your convenience.

TIFFIN MOTORHOMES

WHEREVER YOU GO, WE GO.

DELIVERY

Throughout the entire manufacturing process, your Tiffin motorhome has been regularly inspected by our qualified personnel to assure you of the finest product of the highest quality, **without exception**. However, the final inspection at our factory is not to be the last one. The pre-delivery inspection and system check that your dealer performs are the final inspections done to your particular motorhome prior to you actually receiving your new Allegro Breeze motorhome. Your dealer is also available to assist you in understanding the warranties and completing the necessary forms to activate the warranties for the various appliances and accessories installed in your motorhome.

DEALER RESPONSIBILITIES

1. **A pre-delivery inspection and systems check** is performed to assure a thorough inspection of the motorhome and to assure the proper operation of all factory-installed components.
2. **A customer walk-through** is performed to familiarize the new customer with the motorhome, its systems and components, and their proper and safe operation.
3. Delivery of the **Owner's Information Package** which contains warranty cards and registrations for the vehicle and all factory-installed components from other vendors and suppliers to Tiffin Motorhomes. The detailed operation instructions and maintenance instructions on these components are also included in this package.
4. Assisting the customer in **completing the registration forms** to avoid loss of warranty coverage. The dealer should review the limited-warranty provisions with the customer to stress the importance of completing the warranty cards and registration forms for the components in the motorhome to enable the manufacturers to receive them within the prescribed time limits.
5. Providing the customer with **information regarding warranty and non-warranty work** on the vehicle and its separately warranted components.

CUSTOMER RESPONSIBILITIES

The customer is responsible for regular and proper maintenance of the motorhome. Properly maintaining your motorhome will prevent conditions arising from neglect that are not covered by your Tiffin Motorhomes limited warranty. The maintenance guidelines in this manual and any other, applicable manual(s) should be followed. It is your responsibility and obligation to return the vehicle to an authorized dealer for repairs and service.

To assist you in avoiding problems with your motorhome, it is recommended that you do the following:

1. **Read the warranty**. Go over it thoroughly with your dealer to make sure you understand all the terms and conditions of the warranty.
2. **Inspect the motorhome**; do not accept delivery until after you have gone through the motorhome with the authorized Tiffin Motorhomes dealer. Ask questions about anything unfamiliar to you.
3. **Please ask questions** about anything you don't fully understand about your Allegro Breeze. Tiffin Motorhomes is here to serve you and assure that you have all the information necessary for your safe and enjoyable use of your new motor home.
4. When you are taking delivery, **set an appointment for adjustments**. This appointment should be within two weeks after you accept delivery.
5. You are responsible for and expected to **use your Allegro Breeze in a responsible, safe manner**. Please take the time to familiarize yourself with the proper operation of the motor home and all its features before you attempt to use your motor home.

TIFFIN MOTORHOMES LIMITED WARRANTY

The Tiffin Motorhomes limited warranty was provided to you by your authorized Tiffin Motorhomes dealer during the pre-delivery inspection. When you inquire about your Tiffin Motorhomes warranty, please refer to this document. Should you need or desire an additional copy or other information, please contact:

Tiffin Motorhomes, Inc.
105 2nd St. NW Red Bay, AL 35582
Phone: 256-356-8661
Email: info@tiffinmotorhomes.com

Tiffin Motorhomes will be pleased to send you an additional copy or any other information requested, as may be warranted.

MAJOR EQUIPMENT MANUFACTURERS

The following list is a compilation of the vendors and suppliers of the major subsystems and components of your Allegro Breeze. This list is provided for your convenience and is not meant as a complete substitution of the literature and accompanying "how to contact us" information supplied by those vendors and suppliers in your Owner's Information Package. Where appropriate, website information is provided as well.

• Atwood Mobile Products	(800) 646-8557	atwoodmobile.com
• LP Gas Water Heater	(815) 877-5700	atwoodmobile.com
• Denso Corporation	(248) 350-7500	globaldenso.com
• Flexsteel Industries	(319) 556-7730	flexsteel.com
• HWH Corporation	(800) 321-3494	hwhcorp.com
• Kwikee	(541) 942-3888	kwikee.com
• Norcold, Inc.	(800) 543-1219	norcold.com
• Onan Corporation	(612) 574-5944	onanindiana.com
• Power Gear	(800) 334-4712	powergear.com
• RV Products (Coleman A/C)	(316) 832-3400	airxcel.com
• Precision Circuits Inc.	(630-240-9832	precisioncircuitsinc.com
• Saf-T-Alert (CO/LP Alarm)	(800) 383-0269	safetalert.com
• Sharp Corporation	(800) 237-4277	sharp-usa.com
• Suburban Manufacturing Co.	(423) 775-2131	suburbanmanufacturing.com
• The Dometic Corporation	(219) 294-2017	dometic.com

For those looking for more information (e.g., locations of authorized subsidiaries), the following web site, **www.rvamerica.com/data/s_alist.htm**, should be helpful. This site provides complete, alphabetic listings of all suppliers and vendors for all contemporary recreational vehicles and motor homes.

WARRANTY SERVICE

If any warranty service may be required, that service needs to be completed during the warranty period (basic warranty: 12 months or 12,000 miles). Tiffin Motorhomes warrants its unitized construction for 10 years and its laminations for five years. Any service work performed after the expiration of the Tiffin Motorhomes warranties **WILL NOT** be covered by those warranties.

Exceptions may be made, on an individual basis, to this deadline on account of the unavailability of parts and/or service appointment time where work is to be performed. However, don't rely on the possibility of an exception; please schedule any desired in-warranty work before your warranty expires.

OWNER'S INFORMATION PACKAGE

The Owner's Information Package includes valuable documents about your Allegro Breeze and its components and systems. By consulting the booklets and instruction manuals included in the Owner's Information Package, you will learn how to operate, maintain, and troubleshoot these items safely and effectively. The Tiffin Motorhomes Allegro Breeze Owner's Manual does not cover every possible detail of equipment—standard and/or optional—installed on or in your vehicle.

As with all valuable documentation, please keep them in a safe, secure place for your later use and consultation. When you complete and mail to the respective manufacturer(s) any warranty/guaranty registration card(s), make a photocopy of both sides of each card prior to mailing and keep the photocopy in your permanent records for your Allegro Breeze motorhome.

CUSTOMER RELATIONS

If you wish to schedule maintenance or service or wish to order parts, you should notify your local authorized Tiffin Motorhomes dealership to set up an appointment. If you are unsure of the location of your nearest authorized Tiffin Motorhomes dealership, please access the Tiffin Motorhomes website at www.tiffinmotorhomes.com and then click on the "Locate Dealer" button, then enter in the appropriate search criteria such as state and retail sales, then click on the red ball located on the map to find dealer information in that area.

SPECIFICATION LABELS

There are two main numbers used to identify your Allegro Breeze. The Vehicle Identification Number (VIN) is the legal identification of the completed vehicle. The VIN is the number used by the state for vehicle identification and registration. Additionally, there is a Tiffin serial number (Figure 1-1). This number can be found on the side of the dashboard. A typical sample of this identification label is shown below.

Figure 1-1: Tiffin serial number

Figure 1-2: RVIA Label located on the outside of the motorhome

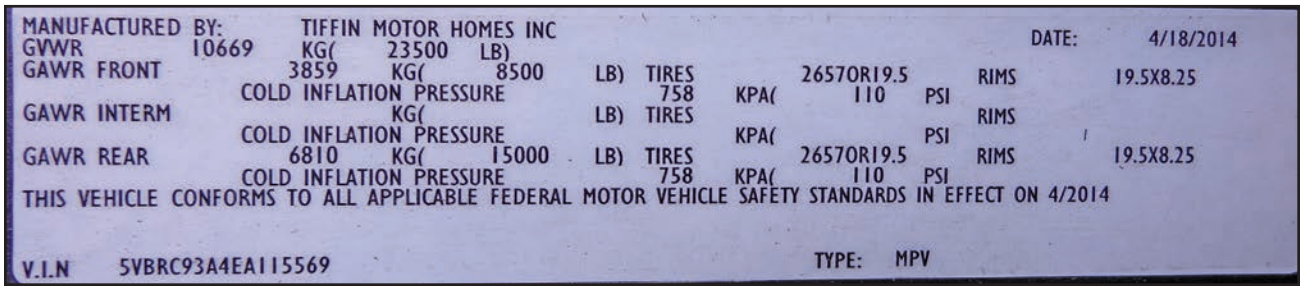
MANUFACTURED BY: TIFFIN MOTOR HOMES INC
DATE: 4/18/2014
GVWR 10669 KG(23500 LB)
GAWR FRONT 3859 KG(8500 LB) TIRES 26570R19.5 RIMS 19.5X8.25
COLD INFLATION PRESSURE 758 KPA(110 PSI
GAWR INTERM KG(LB) TIRES RIMS
COLD INFLATION PRESSURE KPA(PSI
GAWR REAR 6810 KG(15000 LB) TIRES 26570R19.5 RIMS 19.5X8.25
COLD INFLATION PRESSURE 758 KPA(110 PSI
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON 4/2014
V.I.N 5VBRC93A4EA115569
TYPE: MPV

Figure 1-3: Federal Motor Vehicle Standards label located inside the doorway of the coach.

Another label affixed to your Allegro Breeze is the Recreational Vehicle Industrial Association (RVIA) Weight Label (Figure 1-2) which is a required label for your vehicle. Tiffin Motorhomes, a manufacturer-member of RVIA, has the obligation to disclose the following information, at minimum, to the purchaser of the motor home:

• An indication of the contents of the motorhome weight label affixed to the motorhome.
• A concise explanation of the following items: Vehicle Weight (VW) distribution and Proper weighing techniques to be used to weigh the vehicle.
••Specific definitions for the following terminology:

Gross Vehicle-Weight Rating (GVWR) – This is the maximum permissible weight of the motor home when it is fully loaded.

Unloaded Vehicle Weight (UVW) – This is the weight of the motor home, as built at the factory, with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, LP gas, or any dealer-installed accessories.

Cargo-Carrying Capacity (CCC) – This is the maximum weight of all occupants including the driver, personal belongings, food, fresh water, waste water, LP gas, tools, tongue weight of towed vehicle [if any], dealer-installed accessories, and the like. The CCC is equal to or less than the GVWR minus the UVW.

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MOTORHOME
WEIGHT INFORMATION

YEAR: **2014** Model Name: **45 LP - Powerglide 51300**

Serial Number: **7361**

GVWR (Gross Vehicle Weight Rating)
is the maximum permissible weight of the fully loaded motorhome.

UVW (Unloaded Vehicle Weight)
is the weight of this motorhome as manufactured at the factory with full fuel, engine oil and coolants

SCWR (Sleeping Capacity Weight Rating)
is the manufacturer's designed number of sleeping positions multiplied by 154 pounds (70 kilograms).

CCC (Cargo Carrying Capacity)
is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full propane weight and SCWR.

CARGO CARRY CAPACITY (CCC) COMPUTATION

		pounds	kilograms
GVWR		51,300	23,270
minus UVW		37,330	16,933
minus fresh water weight of	90 gallons @ 8.3lb/gal	747	339
minus propane weight of	24.5 gallons @ 4.2lb/gal	82	37
minus SCWR of	4 persons @ 154lb/person	616	279
CCC for this motorhome*		12,525	5,681
GCWR		66,300	

*Dealer installed equipment and towed vehicle tongue weight will reduce CCC

WARNING: CONSULT OWNERS MANUAL(S) FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES INCLUDING AUXILIARY BRAKE REQUIREMENTS FOR ANY TOWED TRAILER OR TOWED VEHICLE.

This vehicle contains composite wood products that comply with the applicable California Code of Regulation Section 93120 Phase 1 or Phase 2 Formaldehyde emission standards

"Just ask someone who owns one"

Figure 1-4: Sample Motorhome Weight Label which can be found in the bedroom closet

Gross Combination-Weight Rating (GCWR) – This is the value specified by the chassis manufacturer as the maximum allowable loaded weight of the motor home with a towed trailer and/or vehicle [if any].

Sleeping-Capacity Weight Rating (SCWR) – This is the maximum weight capacity of the combined number of persons (i.e., number of people multiplied by 154 pounds per person) permitted to sleep within the vehicle.

Gross Axle-Weight Rating (GAWR) – This is the maximum allowable weight for an axle; the GAWR considers the weakest link in the tire, wheel, brakes, hubs, axle, springs, and attaching parts. To illustrate, if the axle is rated at 15,000 pounds and the tires are rated at 3,200 pounds each as a dual installation; then the maximum GAWR would be 12,800 pounds for a four-tire vehicle.

WEIGHING PROCEDURES

To weigh the motorhome properly, the motorhome should be level when the weighing process is performed. Your Allegro Breeze motor home has been designed and built in compliance with the recommended limits of the major-component/system suppliers to provide a realistic CCC. It is up to the final user to provide even distribution of the loads brought into the motor home to prevent uneven loading. Once the vehicle is loaded, it can be taken to any certified drive-on scales or individual-wheel scales to determine that the final weight is within specified limits for the motorhome. The procedure that can be used is as follows:

First, drive the motorhome onto the scales so that all wheels are on the scales; this provides the gross vehicle weight (GVW) of the vehicle and can be recorded as such. The GVW should not exceed the GVWR specified for the vehicle.

Second, drive the motorhome so that the front wheels are off the scales and only the rear wheels remain on the scales; this provides the total weight of the vehicle, save for the front axle. This weight should not exceed the total rating of the axles remaining on the scales. The front axle weight is determined by subtracting the weight from the GVW that was obtained in the first step which was performed earlier. The result should not exceed the listed front-axle weight rating.

WEIGHT DISTRIBUTION

To assure the maximum stability of the motorhome under static (i.e., parked) and dynamic (i.e., moving) conditions, the distribution of the items to be carried and stored within the motorhome and in the storage bays underneath the motorhome should be performed in such a manner to strive for reasonably even side-to-side and front-to-rear dispersion of the weight of the stored items. This process will assure that the motorhome is not “lop-sided” in weight distribution (i.e., all the stored weight on one side and/or mainly towards the front or the rear)—keeping a center of mass of the motorhome essentially centered on a front-to-rear and side-to-side basis will also provide better control of the motorhome when it is in motion.

SAFETY MESSAGES

Please note that several labels listed in this manual represent items that need your attention. The Danger, Warning, Caution, and Notice labels alert you to precautions that may help you avoid damage to your motorhome, its equipment or your personal safety. Please read and follow them carefully.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION indicates a hazardous situation, which, if not avoided, could result in minor or moderate personal injury.

WARNING

WARNING indicates a hazardous situation, which, if not avoided, could result in death or serious personal injury.

DANGER

DANGER indicates a hazardous situation, which, if not avoided, will result in death or serious personal injury.

ALLEGRO Breeze

SAFETY INSTRUCTIONS

Chapter

2

SAFETY CONSIDERATIONS

Prior to using your motorhome, especially for the first time or after a long period of non-use, please read thoroughly all the instructions in the Owner's Manual and the chassis-manufacturer's manual before attempting to operate your motorhome. There are several safety considerations which you should realize and follow while your Allegro Breeze is in motion. These safety considerations, as well as others meant to preclude any damage to the motorhome, are listed in this chapter. Besides the driver, it would be helpful for the passengers to be familiar with these safety considerations and precautions, too.

WARNING

Before your motorhome is to be towed, be sure that you have read the entire Owner's Manual and that you fully understand the equipment on your motorhome and how to use that equipment safely.

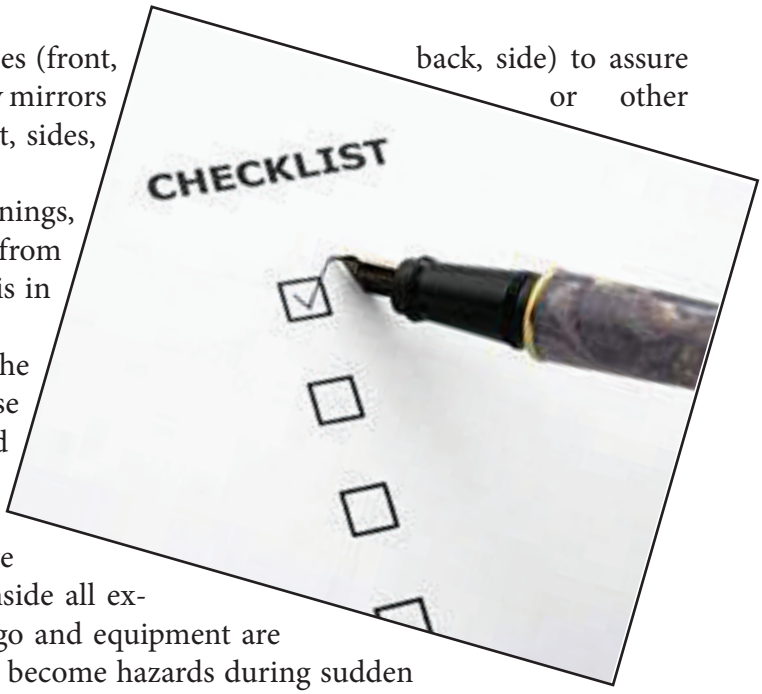
GENERAL WARNINGS

In general, there are several "common-sense" safety precautions that should be taken every time the motorhome is to be used on the road. These precautions include:

- Only seats with seat belts should be used while the motorhome is in motion; those seat belts should be worn by all people (driver, passengers) in the motorhome at that time.
- While the motorhome is moving, lock all seats in the forward-facing position to provide maximum safety for the users.
- While the motorhome is moving, no one inside should ever stand or kneel on seats (e.g., young children).
- In the majority of states, it is the law that seat belts must be used (fastened snugly about the chest and hip areas), anytime the motorhome is in motion, to provide desired protection in the event of a crash.
- Any fire extinguisher(s) should be inspected on a monthly basis to assure that each extinguisher is properly charged and ready for operation.
- Any smoke and/or carbon-monoxide (CO)/liquid propane (LP) alarm(s) should be regularly inspected and tested. If being used for the first time, the smoke and/or CO/LP alarm should be properly activated and fresh batteries installed before the motorhome is placed into service. Never sleep in a motorhome not having functional smoke and/or CO/LP alarm(s).
- While the motorhome is moving, the sleeping facilities are not to be used.
- In the event of an emergency, be sure to be familiar with all escape exits (doors, escape window) Do not use the emergency window as a routine exit; this is strictly to be used for emergency purposes only.
- Movement inside the motorhome should be minimized while the motorhome is in motion.
- Never leave the driver's seat unattended while the motorhome is in motion.

YOUR PRE-DEPARTURE CHECKLIST

For your continued safety and convenience, the following is a representative "check list" designed to assure your safety while driving:



√ Clean all windows, mirrors, and light lenses (front, back, side) to assure that you can "see" and "be seen." Reposition any mirrors or other fixtures to provide an unobstructed view (front, sides, and back) from the driver's seat.

√ Remove or secure all loose fixtures (e.g., awnings, flags, antennas, portable lights) to keep them from falling from the motorhome when the vehicle is in motion.

√ Make a "walk-around" visual inspection of the motorhome to note any irregularities (e.g., loose trim) or problems (e.g., low tires); correct noted problems accordingly

√ Check all exterior storage-compartment and generator-compartment doors to make sure they are properly latched. If need be, check inside all exterior compartments to make sure that all cargo and equipment are properly secured so they won't work loose and become hazards during sudden starts and stops.

√ Check tires for proper inflation (i.e., cold inflation pressure: 100 psig). If the motorhome has not been used, make sure that the "cold inflation" pressure is maintained. If the motorhome has recently been used, make sure that the "hot inflation" pressure (see the tire-manufacturer's literature to determine appropriate "hot inflation" pressure) is maintained. All tire pressures should be within 1-2 pounds (psig) of each other.

√ Examine wheel lug nuts to assure their proper tightness. If any lug nuts were found to be loose, first check the fit of the wheel to the hub to make sure the wheel is not mis-mounted which would produce a "wobbly" wheel when the motorhome is in motion, then tighten the lug nuts.

√ Check all fluid levels (e.g., engine oil, transmission fluid, coolant, power-steering fluid, brake fluid, battery fluid [if applicable], windshield-washer solvent) to assure correct levels are maintained. Fill any low reservoirs, as needed.

√ DO NOT SUBSTITUTE any other fluids for specified oils, transmission fluid, brake fluid, or other hydraulic fluids—in most instances, substitutions are not acceptable and may void warranties.

√ Prior to starting the motorhome engine, make sure all lines (e.g., water, sewer) and electrical power cords are disconnected and properly stowed.

√ Assure the leveling jacks are in the "travel" position.

√ After entering the motorhome, make sure that the electrically-actuated, retractable step has properly operated to retract the step fully before starting the engine of the motorhome.

DRIVING SAFETY

Various adjustments need to be made to assure the driver's comfort and the safety of the motorhome before starting and moving the motorhome; these include:

Figure 2-1: Driver's side dashboard and instrument console.

• Do not attempt to adjust the driver's seat while the vehicle is moving.

• Do not adjust the tilt steering while the vehicle is moving.

• The driver should be familiar with all gauges, instruments, switches, and indicators on the instrument panel prior to driving.

• Do not operate the cruise-control function during any extreme weather situations (e.g., snow, ice, sleet, heavy rain) or when road conditions are hazardous (icy, snowy, winding roads, city traffic) or when a constant speed of the motorhome is not possible or if traffic conditions don't warrant such.

• Avoid driving the motorhome through any standing water. If deep enough, such water can wet the brake pads and cause fading of the brakes (i.e., loss of braking power) and lead to excessive sliding or pulling to one side or another.

• Know the limits of operation of the motorhome. Don't try to achieve excessive speeds, climb overly steep hills, traverse overly long grades, attempt to use the motorhome as an "off-the-road" (OTR) motorhome, rapidly switch lanes, or rapidly accelerate or decelerate the motorhome. When in doubt about the handling characteristics of the motorhome, consult your chassis manual for information.

• The solar or blackout shade is operated by a switch located on the driver's console. Depress the switch to lower or raise the shade. The switch will be labeled "VISOR." The time delay switch must be held a few seconds before it is activated.
CAUTION: DO NOT over extend either shade as this may block the view of the road.

• **NEVER** drive the vehicle with a slideout room extended.

FUELS FOR THE MOTORHOME

WARNING

Liquid propane (LP) gas containers, gasoline, or other flammable liquids are not to be placed or stored inside the motorhome because a fire or explosion may occur. LP gas containers (Figure 2-2) are equipped with safety valves that may relieve excess pressure by discharging gas into the atmosphere—any containment of that vented LP gas constitutes an explosive hazard.

Figure 2-2: LP tank

Your motorhome is designed to use low sulfur fuel only for the engine used in the routine operation of the motorhome—these require prudent and safe handling to assure safety of the motorhome and its occupants; namely:

DANGER

All pilot lights, appliances, and their ignitors must be turned off before refueling of motor fuel tanks or propane containers. A failure to comply, could result in serious injury or death.

- Anytime the motor fuel (i.e., diesel fuel) or the LP tank is to be filled, the motorhome engine is to be turned OFF and all pilot lights and appliances should be turned OFF.
- A NO SMOKING policy should always be observed when refilling the fuel or propane gas tank.
- NEVER use an open flame to test for LP gas leaks or to examine the fluid levels in the fuel tanks.
- After filling any LP system, immediately replace and secure all protective covers and caps.
- After closing the LP valve, close and securely latch the LP door to prevent unintentional access or damage.
- NEVER connect natural gas to the LP gas system—LP gas and natural gas are not interchangeable.
  - When lighting range burners, do not turn burner controls to "On" and allow the gas to escape before lighting.
- NEVER use any other "burning" equipment (e.g., charcoal grills, wood stoves, butane lights, propane lights) inside the motorhome. Doing so may cause fires and/or asphyxiation.

WARNING

Any portable, fuel-burning equipment (e.g., charcoal, propane, butane, wood) must not be used inside the motorhome. Any use of such equipment inside the motorhome may readily cause fires and/or asphyxiation by carbon-monoxide poisoning. Further, such unauthorized use would probably invalidate your motorhome insurance policy.

LIQUID PROPANE (LP) GAS SYSTEM

Check the propane gas system for leaks yearly or as necessary. If you smell gas within the motorhome, quickly perform the following:

IF YOU SMELL PROPANE

- Extinguish any open flames, pilot lights and all smoking materials.
- Do not touch electrical switches.
- Shut off the gas supply at the tank valve or gas supply connection.
- Open doors, windows and other ventilating openings.
- Leave the area until the odor clears.
- Have the propane system checked and leakage source corrected immediately.

A failure to comply could result in serious injury or death.

A WARNING label such as this is located near the LP gas container.

Any overfilling of the LP gas container(s) can result in uncontrolled gas flow—a prime condition for a fire or explosion.

The LP container should only be filled to 80 percent of its capacity; the remainder of the cylinder space is an air space to contain expansion of that liquid when subjected to varying ambient-temperature conditions.

Filling in excess of 80 percent of the liquid volume of the container reduces that air space and, thus, creates a condition for possible over-pressurization of the container.

Figure 2-3: LP tank

All LP appliances in your motorhome have been approved for use in motorhomes by a nationally-recognized testing laboratory (i.e., UL and CSA certified). When properly used, LP gas is a clean-burning fuel which can be dependably used. In actuality, the LP container contains liquid propane under high pressure.

The liquid, when it passes through the tank valve to a lower pressure, vaporizes into a gas, and then passes through a regulator to maintain a constant pressure. This gas, then, is the actual fuel distributed through the LP-gas manifold system to the LP-based appliances used in your motorhome.

LP-appliance lighting problems are typically caused by an improperly-adjusted gas regulator. NEVER attempt to adjust or reset the gas regulator yourself. An authorized service technician is needed to make these adjustments. As a good preventive-maintenance activity, the regulator should be checked annually by a service technician and also before every extended trip.

Even though the LP-gas system is leak-checked and verified at the factory at the time of manufacture, normal usage (travel vibrations, etc.) could loosen the fittings. Consequently, it is wise to check the gas fittings periodically for leak tightness.

You can wipe some leak-detector solution (e.g., a "liquid-soap"-like solution) on all the fittings, connections, and junctures when the system is under pressure. Should there be any leaks, small bubbles will appear at any leak sites.

Generally, loose fittings can be tightened to stop the leaks. If this process doesn't work, then you must shut off the main gas valve at the LP cylinder(s) and immediately consult an authorized service technician to determine what repairs are necessary. Leaks may also be detected by noting a sulfurous odor (i.e., rotten eggs). DO NOT search for a leak by using a match or open flame.

WARNING

When the motorhome is not in use, be sure to close the main LP gas valve at the tank. When the LP gas tank is to be refilled, close the main valve to preclude the chance of pilot lights possibly igniting fumes from the LP fuel. As some LP-gas appliances (e.g., refrigerator, furnace, water heater) have Direct Spark Ignition (DSI) systems, it is very important that these appliances be turned off when the LP gas is off. The DSI boards will continue to work (i.e., emit an ignition spark) even when there is no LP gas available.

LP GAS REGULATOR

The LP gas regulator (Figure 2-4) is the most critical element of the LP-gas distribution system. The regulator converts the high-pressure LP gas from the tank into a reduced-pressure LP-gas supply suitable for use in the various appliances in the motorhome.

You should regularly inspect the regulator system. If any damage or corrosion is noted, contact an authorized service technician to inspect and repair or replace the regulator.

Do not attempt to adjust the regulator yourself; the regulator has been pre-set at the factory. Only a qualified LP service technician using specialized equipment should adjust the regulator.

REGULATOR #6689 COMPARTMENT
THIS COMPARTMENT MEETS THE INTENT OF AND
IS A REQUIREMENT OF ANSI A119.2-1990
PARA 2-2.7.9-DO NOT REMOVE OR ATTEMPT
REPAIRS ON REGULATOR. CALL YOUR RV
OR LP GAS DEALER. IF YOU SMELL GAS,
CLOSE THE SERVICE VALVE.

Figure 2-4: LP Gas Regulator

LP DISTRIBUTION SYSTEM

The primary LP distribution system in the motorhome is a steel manifold located underneath the motorhome. The secondary distribution lines running from this main distribution system are usually reinforced rubber supply lines.

If any of the gas lines break, do not attempt to splice them—always run new lines to maintain the safety of the motor home. It is ***strongly*** recommended that only qualified service technicians perform this work.

Remember, the main valve at the LP gas tank must be closed whenever any gas appliance is to be installed, removed, or serviced—this process prevents LP gas leakage which could result in a possible harmful explosion. If the odor of LP gas is ever detected, immediately discontinue use of any gas appliances and seek the services of a qualified service technician.

WARNING

The LP gas distribution system in your motorhome is designed for liquefied petroleum (LP) gas ONLY. DO NOT attempt to connect and use any natural gas or butane gas system with htis LP gas system.

RECOMMENDED PRACTICES

The following practices are recommended to assure continued safety and reliability of the LP gas system. These are, of course, representative; not necessarily exhaustive. In all cases, use common sense in the use of the LP system.

• Visually inspect the LP fill valve before any refueling operation to look for foreign materials or debris; remove, as necessary, to assure a leak-tight connection.

• Prior to any refueling operation of the LP gas system, shut off all the pilot lights.

• NEVER, under any circumstances, check for LP gas leaks with any type of open flame; doing so would probably cause an explosion and subsequent fire.

• Periodically inspect visually the entire LP gas distribution system; do so at least annually and before any major trips.

Should problems be noted, seek the services of a qualified service technician to make necessary repairs and perform any maintenance.

CARBON MONOXIDE WARNING

WARNING

Avoid inhaling exhaust gases as they contain carbon monoxide, which is a colorless, odorless and poisonous gas. Serious illness, injury or death can result.

A properly maintained engine exhaust and ventilation system is the best way to protect against carbon monoxide's entry into the vehicle. We recommend that the exhaust system and body be inspected by a qualified motorhome service center:

• Each time the vehicle is serviced for an oil change.

• Whenever a change in the sound of the exhaust system is noticed.

• Whenever the exhaust system, underbody, or rear of the vehicle is damaged.

To allow proper operation of the vehicle's ventilation system, keep front ventilation inlet grill clear of obstructions at all times.

Do not occupy a parked vehicle with engine running for an extended time and do not run engine in confined areas, such as a garage.

Your motorhome is equipped with a Carbon Monoxide alarm, which has a sensor that is designed to detect carbon monoxide gas fumes resulting from incomplete combustion of fuel.

Figure 2-5:
Carbon Monoxide alarm

It will detect carbon monoxide gas from any combustion source such as from the furnace, oven/range, water heater, refrigerator, chassis engine and generator engine.

CO/LP GAS DETECTOR

Since LP gas is more dense than air, the LP gas will naturally settle to the lowest point in an enclosed space. In the motorhome, this would be the floor.

Figure 2-6:
Carbon Monoxide alarm

Because of this, the CO/LP gas detector (Figure 2-6) is necessarily mounted close to the floor. To activate the CO/LP-gas sensor on this detector for the first time, remove the sensor activation strip, if such was not performed during the pre-delivery inspection.

If the alarm persists in re-arming and giving further alarms, ventilate the motorhome by opening doors and windows and then check for possible LP gas leaks. If the leak cannot be readily found, then close the main valve to the LP tank and turn "off" all gas appliances and then take the motorhome to a qualified service technician after the ventilation process is concluded and the doors and windows again shut.

This single compact system provides a powerful combined alarm that detects both Carbon Monoxide (CO) and explosive gases Propane (LPG) and Methane (Natural Gas). This detector uses the latest microprocessor technology combined with two electronic self-cleaning sensors that operate independently of each other. The combined unit can detect both CO and explosive gases simultaneously.

Carbon monoxide (CO) is a colorless, odorless, tasteless gas which, when breathed, bonds to the hemoglobin in the red blood cells and, thus, drastically reduces or blocks the transfer of oxygen from the lungs to the rest of the body.

In sufficient concentrations, CO kills by asphyxiation. In lesser amounts, CO makes the victim groggy, lethargic, and unable to think clearly or quickly.

CO is one of the products of combustion for many materials including petroleum-based products (e.g., gasoline, diesel fuel, propane, butane; among others). Since many of the appliances and the engines associated with the motorhome produce CO in their normal operations, it is necessary to assure that CO levels do not rise to dangerous levels within the motor home. In sufficiently high concentrations, CO can kill in minutes.

The most susceptible people to CO poisoning are unborn babies, small children, pregnant women,

senior citizens, and people with cardiovascular or respiratory problems.

Consequently, it is prudent to check the CO monitor regularly for normal operation and to remain aware of the symptoms of CO poisoning which include dizziness, nausea, vomiting, muscular twitching, throbbing in the temples, incoherent thinking and speech, weakness, sleepiness, and intense headaches.

Should any of these symptoms be experienced in the motorhome, you should IMMEDIATELY evacuate the motorhome and seek medical help. Shut down the motorhome and do not attempt to operate it again until the source(s) of the CO are located and fixed.

DANGER

Carbon monoxide gas—derived from products of combustion of diesel fuel, LP gas, and other petroleum-based products—is a deadly gas which can kill motorhome occupants, if allowed to accumulate in sufficient concentration. Assure that all engine operations are not restricted—tailpipes and exhaust ports should not be blocked or restricted in any way. Additionally, any accumulation of exhaust gases outside or underneath the vehicle should be avoided as such may enter the motor home through windows or vents—be careful how and where the motor home is parked to avoid such conditions. Regularly monitor outside conditions to assure that all exhaust gases can readily be dissipated and not enter the motor home inadvertently.

DANGER

Never sleep in a motorhome when the engine is running—engine exhaust fumes could enter the motorhome and cause disability or death. Regularly check the exhaust system to note any leakage sites and, if found, discontinue use of the motor home until they are repaired by a competent, qualified service technician. Do not attempt repairs on the exhaust system yourself and do not modify (temporarily or permanently) the exhaust system at all.

FIRE SAFETY

As with any enclosed system containing the three required conditions for fire (i.e., combustible materials, oxygen, ignition sources), there will exist the possibility of fire.
Tiffin Motorhomes has taken every precaution and design practice to minimize or negate this possibility, but the final determination rests with the owner and user of the motorhome.
Accordingly, it is in the best interests of the owners, users, and their guests to be aware of basic fire-safety practices and procedures and those particular features that Tiffin Motorhomes has provided for fire safety.

FIRE EXTINGUISHER

The Allegro Breeze is equipped with a fire extinguisher located on the dashboard (Figure 2-7) near the front door. The extinguisher is rated for both Class B (i.e., grease, gasoline, diesel fuel, flammable liquids) and Class C (i.e., electrical) services.
Read and understand the accompanying owner's manual on that extinguisher (found in your Owner's Information Package) and remember the location of the extinguisher.
These types of fire extinguishers are pressurized, mechanical devices and require that appropriate care be used in their safe storage and use. The owner's manual will provide necessary guidance for the proper storage, handling, and use of the extinguishers.
Prudent preventive maintenance suggests monthly inspection of any fire extinguisher to assure that it is sufficiently pressurized (i.e., the needle on the gauge is in the "normal" zone) and that the mechanical components are not blocked in any way.
Do not test a fire extinguisher by partially discharging the unit—this will cause a loss of pressure and may lodge some fire-retardant materials in the valve mechanism and cause the extinguisher to continue to vent slowly down to zero pressure. If an extinguisher is ever partially used; continue its use until the unit is completely discharged then have the fire extinguisher fully recharged at an appropriate service center (one can call any fire department for information on having an extinguisher recharged in that particular locality).
DO NOT wait a long time to recharge an empty fire extinguisher; you'll never know when it may be needed.

Figure 2-7:
Fire extinguisher

Should a fire occur inside or around the motorhome, evacuate the motorhome quickly and calmly—do not panic. In the event of heavy smoke or extensive flames, keep low (crawl if you must) and make your way to the nearest exit (door, emergency window) and leave. If the fire involves a fuel source (e.g., diesel fuel, LP gas); consider the probability of an explosion and move sufficiently far away to minimize personal harm. If such is available, immediately place a call to the local fire department (or ask someone nearby to do so) to report the fire. Consider the cause and the consequences of the fire and the risks associated with possibly fighting the fire yourself before trying to extinguish it.
DO NOT expose yourself or others to unnecessary danger.

SMOKE DETECTOR

The Allegro Breeze motorhome is equipped with a battery-operated smoke detector (Figure 2-8) located on the ceiling in the living area of the motorhome.

The smoke detector should be tested on a weekly basis, before each trip, and after any period of storage of the motorhome.

If a low-battery condition is noted or the alarm "chirps" to indicate a low-battery condition, immediately replace the battery. It is suggested that you keep replacement batteries in the motorhome for any in-transit replacements so that the smoke-alarm capability is never compromised. **DO NOT** disable the smoke detector for any transient, false alarm (e.g., cooking smoke, dusty furnace, tobacco smoke). Ventilate the motorhome with fresh air and the alarm will reset.

Figure 2-8: Smoke detector.

ELECTRICAL

- Careless handling of electrical components can be fatal. Never touch or use electrical components or appliances while feet are bare, while hands are wet or while standing in water.
- Improper grounding of the vehicle can cause personal injury.
- Do not attach an extension cord to the utility power cord.
- Do not use any electrical device that has had the ground pin removed.
- Avoid overloading electrical circuits. Replace fuses or circuit breakers with those of the same size and amperage rating only. NEVER use a higher rated fuse or breaker.

LOADING

- Store or secure all loose items inside the motorhome before traveling. Possible overlooked items such as canned goods or small appliances on the countertop, cooking pans on the range, or free-standing furniture can become dangerous projectiles during a sudden stop.
- Be aware of GVWR, GAWR, and individual load limit on each tire or set of duals.
- Never load the motorhome in excess of the gross vehicle weight rating or the gross axle weight rating for either axle.

MAINTENANCE

- Do not remove the radiator cap while engine and radiator are still hot. Always check coolant level visually at the see-through coolant reservoir.
- NEVER get beneath a vehicle that is held up by a jack only.
- Do not mix different construction types of tires on the vehicle. Replace tires with exact size, type, and load range.

EMERGENCY EXITS

In the living areas of the motorhome, there are emergency exit windows (Figure 2-9 and 2-10). These windows are designed for emergency exits when it is not practical to exit by the door, which also is an emergency exit - in the front of the motorhome. These windows are readily noticeable by their red handles and the red "EXIT" label on the windows.

Figure 2-9: Emergency exit window

Figure 2-10: Emergency exit latch

To use these windows as emergency exits, lift the handle and push outward on the window. As required, the window can be closed by pulling the window inwards and then lowering the handle to latch the window back in place. When the motorhome is to be parked, it would be wise to note where these windows will be so the exits won't be blocked (e.g., against a tree, pole, or wall).

PARKING PROCEDURES

To park the motorhome in any unfamiliar terrain, examine the site for surface irregularities, slopes or inclines, and other items such as stumps, rocks, external connections for power/water/sewage and also examine the area immediately above the parking site for obstructions like tree branches and limbs, signs, overhead wiring.

If the motorhome is to be backed into the parking site, try to have that site be on the driver's left-hand side, as this will allow the driver to watch the rear of the motorhome. Back up slowly and use the side mirrors and the back-up camera as a guide or, better yet, have another person outside providing guidance to help park the motorhome.

When the motorhome is finally situated, shift the transmission into neutral, set the air brakes, and then turn "off" the engine. Activate the air leveling system to level and stabilize the motorhome.

If the motorhome is to be powered externally, connect the 120 VAC power to the motorhome. Turn "on" the LP gas valve at the LP tank. Connect the fresh-water supply and sanitize the water systems (see

Chapter 11), as needed. Connect the waste drain hose to the external sewer hook-up. Start the refrigerator, water heater, and furnace; as warranted. Light the oven pilot light, as needed. Certain appliances, such as the refrigerator, will not work properly, if the motorhome is not level, so be sure to complete the motorhome-leveling process before activating any of the appliances.

TOWING HITCH

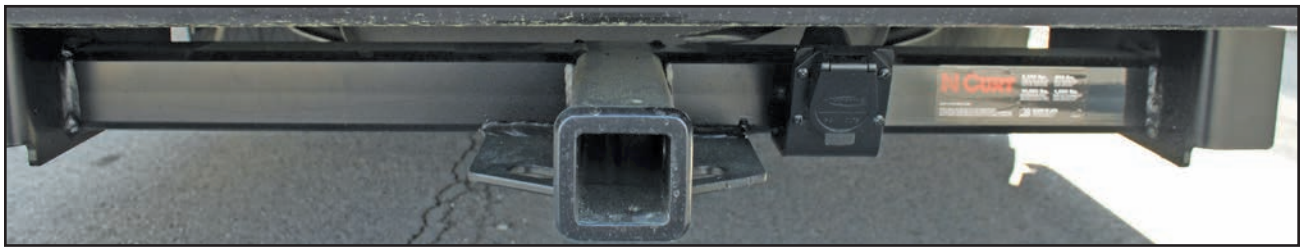


Figure 2-11: Towing hitch

The Allegro Breeze is fully capable of towing typical motor vehicles

The motorhome is equipped with a Class 2; 5,000-pound towing hitch (Figure 2-10) and associated wiring connector.

The wiring connector features a 7-pin connector. The tongue weight is not to exceed 10 percent of the towing capacity. If it is desired to connect a trailer brake actuator, the plug for the actuator is located to the left of the steering column under the dash.

The motorhome is capable of towing light loads and instructions are found in the chassis-manufacturer's literature in the Owner's Information Package provided with the Allegro Breeze.

The total weight of the motorhome and any vehicle towed by that motorhome must not exceed the Gross Combined Weight Rating (GCWR). When the motorhome is being weighed, remember to account for passengers and their locations in the motorhome.

Any vehicles to be towed by the motorhome should have adequate active braking. The wiring connector provided is a standard seven-pin connector.

Tiffin Motorhomes does not recommend using any type of hydraulic towing lift that attaches to the rear of the motorhome designed to carry motorcycles, scooters, golf carts, etc.

ALLEGRO Breeze

HEATING & AIR CONDITIONING

Chapter

3

FURNACE

NOTICE

NEVER attempt to modify the furnace. To do so may cause fire, explosion, carbon monoxide poisoning or asphyxiation. If the furnace is malfunctioning, immediately shut the unit "off" and call a trained service technician as soon as possible.

The Allegro Breeze is equipped with a forced-air furnace fueled by LP gas. The furnace is controlled by the wall-mounted thermostats (Figure 3-1) located inside the motorhome (one in the front of the motorhome; the other in the master bedroom).These thermostats control both the heating and air conditioning for the motorhome.

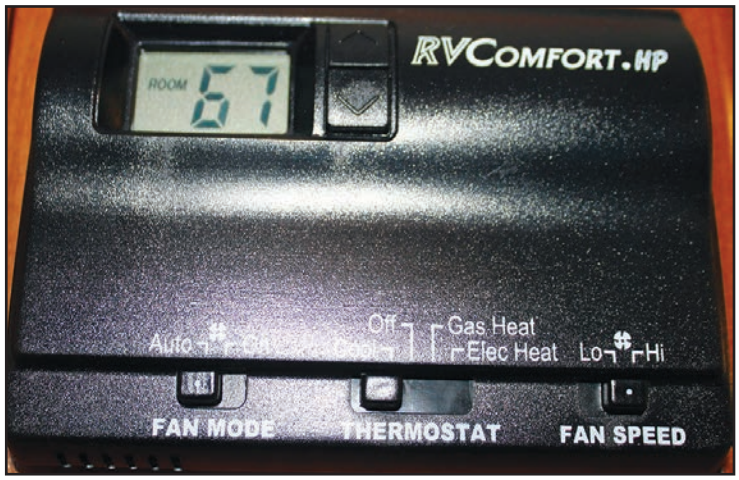


Figure 3-1: Thermostat

In the gas heating mode, the furnace heats air which, in turn, is circulated through ductwork in the floor of the motorhome. If any obstruction(s) block the floor vent(s) or air-return register, then the furnace will not function properly. Any items stored under the cabinets should be carefully stowed to prevent damaging or crushing the furnace ducting or blocking the warm-air return.

When a furnace is being used for the first time, there may be an initial "burn-off" of manufacturing compounds or residues left on the heat exchanger or in the ductwork which could produce odors, fumes, and possibly some smoke. This is normal and should not cause concern, unless it persists for an excessive amount of time.

To minimize the after-effects of this "burn-off" process, the initial use of the furnace should be done with all the doors and windows open to permit normal air circulation to dissipate these odors and fumes.

For routine operation of the furnace, set the thermostat to the desired temperature setting and then turn the thermostat to gas heat. In about a minute, the furnace should begin to operate and warm or hot air should be coming through the ductwork.

To shut down the furnace, turn the thermostat to the "off" position. Even though the thermostat may be turned "off," the furnace system will continue to run for about a minute or so to permit a gradual cool-down of the heating system which is normal.

On a regular basis, thoroughly clean the complete furnace and air-tube passageways to remove dust, lint, and any other possible obstructions. Leak-test the entire LP gas system at least annually. Also check and clean the air-blower system annually.

Any access hatches to the furnace are for authorized service personnel only, as there are no user-serviceable parts on the furnace. Accordingly, do not attempt to tamper with the interior of the furnace.

NOTICE

Be cautious when washing the exterior of the motorhome. Water should never be sprayed directly into the furnace vent. Should any water be forced beyond the rain baffles into the furnace vent, the furnace may rust which, in turn, may cause improper combustion and produce unwanted by-products of combustion.

Before the beginning of each travel season, the furnace should be thoroughly cleaned and inspected. Any obstructions, debris, or lint which may obstruct free air flow or impede the operation of the air-circulation system should be removed. For example, accumulated dust or lint could possibly obstruct the orifices for the pilot light or may accumulate on the blower blades and unbalance the operation of the blower. Additionally, any debris in the ductwork, when heated by the furnace, could emit unpleasant odors or possibly become a fire hazard.

The furnace system should be periodically cleaned. Annually is recommended unless the motorhome is subjected to dust levels significantly greater than average, in which case more frequent cleaning is recommended. The Owner's Information Package provides recommended cleaning tips and procedures. When needed, a more thorough cleaning should be performed by a qualified service technician.

AIR CONDITIONING SYSTEM

The factory-installed air-conditioning system is designed for 120 VAC power supplied either from the external power cord or from the generator. For the best cooling scenarios, park the motorhome in a shady location whenever possible and close drapes on those windows exposed to direct sunlight.

The air-conditioned, cooled air is emitted through the vents which are located in the roof throughout the entire coach along the passenger side. The return air vents run parallel, front to back, on the ceiling along the driver's side of the coach. The return vents are similar to the air conditioning vents, but they contain foam filters that keep dust from flowing back through the air conditioning system. The return filters can be easily removed and cleaned with warm water and and a mild cleaning solution. To remove the filter, simply pull the vent down and lift the filter from inside the opening.

Figure 3-2: Round vent filter

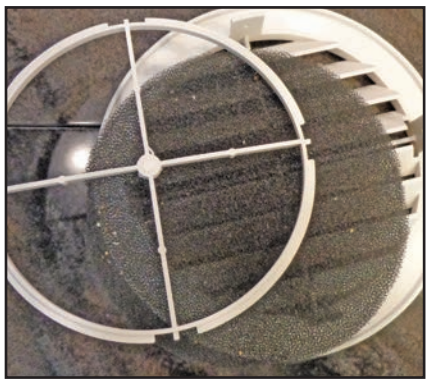


Figure 3-3: Round vent filter

Figure 3-4: Round air vent

NOTICE

The air conditioning system is the major consumption device of electrical power in the motorhome. When this system is being used in an RV park, cumulative use of these air-conditioning systems by the resident vehicles can create a bigger demand for electrical power than is actually available. Accordingly, at times a "brown-out" condition may arise. This is when the AC voltage normally available drops to a lesser value (e.g., 10-20% below normal or more).

"Brown-out" conditions cause appliances to draw greater currents to make up for the reduced voltage; thereby causing circuit breakers to trip or fuses to blow. Under such conditions, your own motorhome is not at fault; simply reset your breakers and/or replace your fuses. Should such conditions continue, you may wish to reduce the electrical load (in this case, turn "off" the air conditioning system for awhile) or start the electrical generator.

THERMOSTAT CONTROLS

The following is a brief overview of how best to use the thermostat (Figure 3-5). For more detailed instructions, please consult the thermostat literature in the Owner's Information Package.

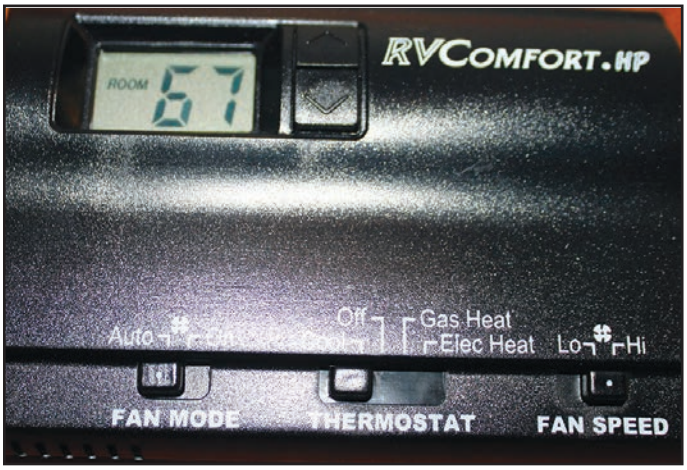


Figure 3-5: Thermostat

1. Use the "Thermostat" switch to select the desired function (e.g., COOL, OFF, GAS HEAT, or ELEC HEAT).
Note: In the "COOL" mode there will be a delay of several minutes before the refrigerant in the air-conditioning system begins to cool the motorhome, as the compressor is on a time-delay circuit and it must also cool the ductwork to the vents first.
2. Select the Fan Mode operation (AUTO or ON) and the Fan Speed operation (LO or HI) to select fan speed desired.
3. Press the Up and/or the Down buttons to set the desired temperature for the motorhome.

NOTE: When the fan mode is in AUTO, the fan will cut on and off when the temperature reaches the desired setting.
When the fan mode is on FAN, it will continue to run even though the compressor cycles on and off when it reaches the desired temperature.
If the motorhome temporarily loses its 110 power, the air conditioning system will resume operation at its last programmed setting once power is restored.
If 12v power is lost to the thermostat, it will automatically re-set to 72 degrees once power is restored.
NOTE: There is a thermostat control for each air conditioning unit, one located in the bedroom and one in the living area.

HEAT PUMP CONTROLS

To activate the heat pump, set the thermostat to ELEC HEAT and select desired temperature.

NOTE: If the setting on the thermostat and the room temperature are more than five degrees apart, the gas furnace will automatically turn ON with the heat pump. Once the room temperature reaches the desired level specified on the thermostat setting, the furnace will cut off and the heat pump will maintain the heating of the coach.

NOTE: The heat pump is controlled by the thermostat located in the living area of the motorhome.

If the external temperature falls to 35-38 degrees Fahrenheit, the heat pump will become inoperative and the gas furnace will begin to operate automatically.

ALLEGRO Breeze

LP GAS SYSTEM

Chapter

4

LIQUID PROPANE (LP) TANK

The Allegro Breeze is equipped with an ASME (American Society of Mechanical Engineers)-approved LP tank (Figure 4-1) which is equipped with an automatic pressure regulator. This tank contains liquid petroleum fuel under high pressure.

A LP gas-distribution system distributes the gas to those appliances using such in the motorhome. The "heart" of this LP gas distribution system is the regulator and it should only be adjusted by a qualified service technician. Most of the problems encountered in lighting the pilots of these appliances are caused by regulator mis-adjustments.

Figure 4-1: LP tank

The major component of the LP gas supply is a manifold pipe which runs underneath the motorhome floor. From this manifold, the various gas appliances are connected by a rubber supply line.

Should any of the secondary tubing develop a leak, do not attempt to splice any of the lines. Instead, have a qualified service technician run a new length of tubing to the appliance of concern and then have that line leak-tested before placing it in normal operation.

To remove, repair, or replace any gas-operated appliance, always close the main gas valve at the LP tank.

WARNING

When the motorhome is not being used, the main LP gas valve must be turned "off." Also, turn "off" the main valve when the LP gas tank is to be refueled to avoid the possibility of ignition fuel fumes by the pilot lights. All gas valves on the gas-operated appliances with Direct Spark Ignition (DSI) should also be in the "off" position during refueling and/or maintenance operations. DO NOT store LP, diesel fuel, propane, butane, or other flammable liquids inside the vehicle as these represent a very real fire hazard and possible threat to life.

NOTICE

If a gas leak is noted or suspected, turn "off" the main valve and keep the LP gas system "off" until that system is inspected by a qualified service technician as soon as possible. Do not delay in addressing any possible gas leaks with appropriate service because of the inherent hazards to safety.

LP TANK FILLING PRACTICES

Any LP gas tank associated with the motorhome should never be filled to more than 80 percent of total capacity. Filling should always be done only when the motorhome is leveled. If the motorhome is not level, the tank may be overfilled (i.e., more than 80 percent of capacity) and, thus, subject the motorhome to possible fire or explosion from resultant uncontrolled gas flows.

LP GAS REGULATOR

As noted earlier, the LP gas regulator (Figure 4-2) is the "heart" of the LP gas distribution system. This regulator reduces and controls the pressure of the gas on the outlet end to provide a constant supply of gas at a constant pressure to the gas-operated appliances. The regulator has a vent to relieve excess pressure on the inlet side of the regulator, should excess pressure develop in the gas tank and connecting gas line to that regulator inlet. The vent would normally release the excess LP gas to the atmosphere until the over-pressurization condition is eliminated.

REGULATOR #6689 COMPARTMENT
THIS COMPARTMENT MEETS THE INTENT OF AND
IS A REQUIREMENT OF ANSI A119.2-1990
PAR 2-2.7.3-(b) NOT REMOVE OR ATTEMPT
REPAIRS ON REGULATOR. CALL YOUR RV
OR LP GAS DEALER. IF YOU SMELL GAS,
CLOSE THE SERVICE VALVE.

Figure 4-2: LP Gas Regulator

This vent should be regularly checked to assure that it is not clogged or obstructed. If that vent is blocked from normal operation, component or system failures may result. If periodic visual inspection indicates any sign of corrosion or degradation, contact a qualified service technician to repair the regulator as soon as possible; **DO NOT** operate the LP gas system with any faulty component in place.

NOTICE

When a LP gas regulator is installed or re-installed, the regulator must always be installed with the gas diaphragm vent facing downwards. For more information, consult the manufacturer's literature in your Owner's Information Package that came with the motorhome.

Always keep the main valve to the LP gas tank closed when the system is not in use. When the LP tank is empty, keep the main valve closed until re-filling is to be performed—this process will keep any moisture-laden air from back-flowing into the gas system and trapping unwanted moisture in the LP gas tank. If an empty LP gas tank has been exposed to the atmosphere for an extended time, let a qualified service technician purge the tank before its next filling operation.

ALLEGRO Breeze

MAJOR APPLIANCES

Chapter

5

LP/GAS REFRIGERATOR

Your coach may be equipped with a standard LP/gas refrigerator. When this refrigerator is in the "LP gas" mode, make sure that the main LP gas valve is in the "on" position before attempting to start the refrigerator. Please note that the refrigerator is equipped with a semi-automatic energy selector (AES) control system which can set automatically to switch between a 120-volt AC system or a LP-gas operation system.

A 12-volt power supply (e.g., 12 VDC system of the motorhome, auxiliary battery, converter, or motorhome engine battery) is required for proper operation of the electronic control panel. For electrical operation of the refrigerator, either the external electrical power line must be connected to the motorhome or the on-board electrical generator must be running to provide the necessary 120-volt AC power. To operate the refrigerator in the LP-gas mode, the main LP gas valve must be "open."

To turn "on" the refrigerator, press the main power ON/OFF button (ON position). Select operation mode (Auto or Gas). If necessary, adjust the thermostat by pressing the temperature selector button.

To turn "off" the refrigerator, press the main power ON/OFF button (OFF position). The refrigerator may be shut off while in any mode of operation by pressing the main power ON/OFF button. This shuts off all DC power to the refrigerator, including the interior light. If the refrigerator will not be in operation for a period of weeks, it should be emptied, defrosted, cleaned and the doors left ajar. The ice trays should also be kept outside the cabinet.

Place a small level on the bottom of the refrigerator to make sure it is level before its operation.

For further operating and maintenance instructions, please refer to the operating booklet found in the Owner's Information Package.

Figure 5-1:
Standard LP/ Gas Refrigerator

NOTICE

The majority of LP gas appliances used in motorhomes normally vent to the outside of the motorhome. When your motorhome may be parked in close proximity to a fuel pump (i.e., during re-fueling operations), it is possible that the diesel fumes could enter this type of appliance and possibly be ignited by the burner flame thereby causing a fire or explosion. Accordingly, please use extreme caution when re-fueling the motorhome.

RESIDENTIAL REFRIGERATOR

Some coaches contain the optional 110-volt style residential refrigerator which is powered from an outside source or from the unit's generator or inverter which uses a 12 volt battery power supply.

This unit operates as most home refrigerators do.

NOTE: While traveling, the refrigerator will be powered by the inverter.

For further operating and maintenance instructions, please refer to the operating booklet found in the Owner's Information Package.

Figure 5-2:
Optional Residential Refrigerator

ICE MAKER

Figure 5-3: Ice maker "Off" position

Your ice maker is equipped with an automatic shut off. As ice is made, the ice cubes will fill the storage tray raising the shutoff arm to the OFF position. Do not force the wire shut off arm up or down.

- To turn ON the ice maker, lower the wire shutoff arm.
- To turn OFF the ice maker, lift the wire shutoff arm to the OFF position (arm up) until it clicks.

MICROWAVE OVEN

The Allegro Breeze contains a standard convection microwave (Figure 5-4). All microwave ranges operate on 120-volt AC electrical power, supplied either by the external electrical hookup or by the onboard electrical generator in the motorhome.

Touch pad controls are used for operating the convection microwave (i.e. cooking temperature, mode, power level, and cooking time). For basic operating instructions, care, and maintenance for the proper use of the microwave, please consult the specific manual in the Owner's Information Package.

Figure 5-4:
Microwave

AIR FILTRATION FAN

Figure 5-5:
Range hood

In the Allegro Breeze, the "exhaust" or air-filtration fan (Figure 5-5) is built into the microwave and its function is to filter the air and exhaust to the outside.

This range hood is equipped with a vent fan and a light for convenient use. The hood should be used whenever any cooking is performed to filter any airborne cooking residues and heated air.

The range hood can be used as supplemental filtration of other odors and gases including tobacco smoke, candle fumes, and related vapors. The range hood contains filters which can be removed and cleaned or replaced to assure normal operation. Consult the particular owner's manual contained in the Owner's Information Package.

COOK TOP

The Allegro Breeze is equipped with a two-burner cook top (Figure 5-7). To ignite the burner, gently push in and turn the control knob to IGNITE POSITION.

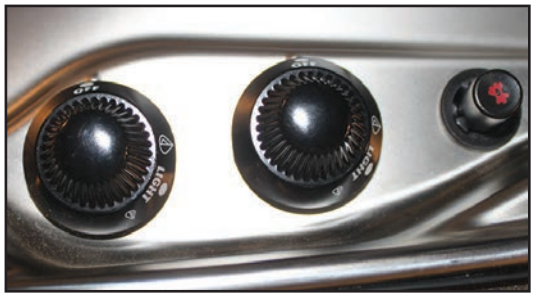


Figure 5-6:
Cook top control knobs

Figure 5-7: Cook top

Once the burner is lit, maintain the knob in this position for a few seconds to ensure the flame remains ignited. To regulate the flame, turn the knob to the desired cooking flame.

Note: If the burner does not ignite immediately check to make sure there is sufficient gas in the propane tank. If the appliance still does not ignite, shut off the gas supply at the propane tank and contact your local dealer.

WARNING

DO NOT USE cooking appliances as a heating source for the motorhome. Cooking appliances require fresh air for safe operation. Before using any cooking appliance, make sure that an overhead vent or window is open and/or turn "on" an exhaust fan.

DANGER

All LP gas-operated appliances in the motorhome will consume oxygen. If the motorhome is totally closed during such operation, the oxygen level may be reduced and the associated carbon monoxide level may be increased thereby causing possible harm or death to the occupants through asphyxiation. Always use these appliances with proper ventilation.

WARNING

Portable fuel burning equipment, including wood and charcoal grills and stoves, should NEVER be used inside the motorhome. The use of this equipment inside the coach can cause fire or asphyxiation and could result in serious injury or death.

DANGER

IF YOU SMELL GAS, YOU SHOULD IMMEDIATELY:

Extinguish any open flames, pilot lights, and all smoking materials. Do not touch or operate any electrical appliances or switches. Immediately shut off the gas supply at the main tank valve or supply connection. Open doors, windows, and other ventilation openings. Exit the RV to allow entrapped LP gas to dissipate. Have the LP gas system checked to locate and fix the source(s) of the leakage.

WATER HEATER

WARNING

DO NOT APPLY 110 VAC POWER to or LIGHT the water heater until after the water heater is filled with water and the water lines and heater tank are purged of any trapped air. Failure to do so will damage the water heater and may cause additional damage to the motorhome.

Before the water heater is to be used, fill the fresh water system and purge the water lines to and from the water heater by opening all the hot-water faucets until water steadily flows from each one and no "spurting" or "hissing" sounds are heard.

Figure 5-8: Water heater switches

The water heater holds 6 gallons of water and uses either the LP gas system or the 120-volt AC electrical system to operate the heater. Proper and safe operation of the water heater requires that all safety information provided in the owner's manual be read and understood before placing the water heater in service. Take the time to become familiar with this manual (provided in the Owner's Information Package).

The water heater is designed for operation either with LP gas or 120-volt AC electricity.

NOTE: When you turn "on" the switch for the water heater the middle red button will light up. It will go off after several seconds—this means the water heater is lit. However, if the light stays illuminated, then that means the water heater has not ignited.

LP Gas – Electronic Ignition Operation (6-Gallon)

1. Turn the Water Heater Ignition switch (Figure 5-8) to the "on" position.
2. If that switch light stays "on" longer than 15 seconds, turn the remote switch to the "off" position and wait 5 minutes.

3. Repeat Step One.
4. For complete shut-down and also before any servicing:
   a. Turn the Water Heater Ignition switch to the "off" position.
   b. Remove the red wire from the left-hand terminal of the ECO switch (ECO to valve).
5. If the water heater fails to operate because of high water temperature, the heater will go into a lockout condition (indicator light "on"). When the water eventually cools, reset the system by turn ing the switch to the "off" position for at least 30 seconds, then turn the switch back "on."
6. If a lockout condition persists, contact your authorized dealer.

120-Volt AC Electrical Operation

1. For electrical operation, use the Water Heater switch found on the master control panel in the overhead compartment in the cockpit area above the passenger's-side location.
2. Completely fill the water heater with water and purge the hot-water lines of any trapped air.
3. Turn the Water Heater switch "on." NOTE: Turning the power "on" to the water heater without having previously covered the water-heating element with water may burn out the element and void the warranty.
4. After awhile, check the water heater for proper operation; the water temperature should be approx imately 140°F (60°C).
5. If the manual-reset, high-temperature-limit switch should trip the circuit breaker; reset the switch by depressing the reset button--use a pencil or other non-metallic object to depress the reset but ton. If the high-temperature-limit switch should again trip the circuit breaker, contact an autho rized service technician or an authorized dealer.
6. Both the electrical and gas operations of the water heater may be used simultaneously to reduce recovery time of heating water up to desired temperature.

For general maintenance of the water heater or specific information about select steps in operating the water heater, please refer to the owner's manual for this appliance contained in the Owner's Informa tion Package.

WARNING

DO NOT STORE any combustible or flammable substances near or adjacent to the water heater. Provide adequate space for ventilation and air circula tion.

WATER HEATER STORAGE

If the motorhome is to be stored during the winter months, the water heater should be drained to prevent damage caused by freezing water contained in the water heater.

To drain the water heater, first turn "off" all electrical power, turn "off" the LP gas going to the water heater, then turn "off" the water pump. Open both the hot- and the cold-water faucets to drain the water lines and open the drain on the water heater to drain the entire system.

When re-activating the water heater after the motorhome is taken out of storage, make sure that the entire water system, including the water heater, has been filled with water and the lines have been purged of any entrapped air before relighting the water heater. Failure to do so may allow the water-heating element to be turned "on" before it is immersed in water; thereby, causing the premature failure of the heating element and voiding the warranty.

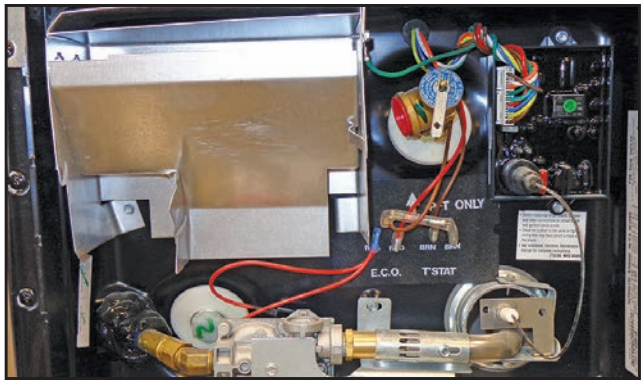


Figure 5-9: Water heater

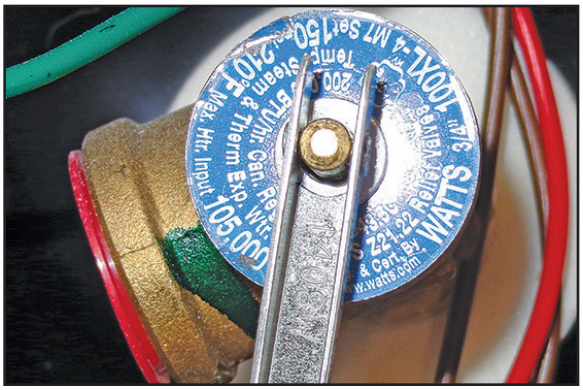


Figure 5-10: Water heater relief valve

PRESSURE RELIEF VALVE

The relief valve for over-pressure and over-temperature conditions is located on the exterior of the water heater. This valve will operate if the water temperature reaches or exceeds 210°F or if the water pressure reaches or exceeds 150 psig.

Since the water system in the motorhome is a closed system when all water valves are shut, the water-heating cycle can raise the temperature and, consequently, the pressure, of the water in the water heater; thereby realizing pressure increases approaching 150 psig.

Should this pressure (i.e., 150 psig) be reached, the pressure-relief valve will begin "weeping," that is, minor dripping or leakage from that valve until the pressure drops below 150 psig, at which time the pressure-relief valve will re-seat itself and restrict the water flow. This is normal operation and should not be a cause for alarm. Do not obstruct or block the pressure-relief valve in any way, as this would keep the valve from functioning normally and protecting the hot water system.

ENTERTAINMENT

Chapter

6

TELEVISION SYSTEM OPERATION

TELEVISION ANTENNA

You can automatically search for channels that are active in your area by editing and scanning channels on your remote control. To do this you will need to:

- Press the power button to turn the television ON
- Press Settings
- Go to Channels, press "OK"
- Go to Auto Tuning, press "OK"
- Press "OK" on Start
- After Auto Tuning is complete, press the "EXIT" button.

NOTE: The booster must be on for ANT (green light will appear) and off for the cable. The booster is located in the front, right cabinet of your unit. If you do not receive the desired channels, re-direct the Antenna with Control located in the upper cabinet in front of the passenger seat and over the entrance door. After re-directing the antenna, you must rescan channels.

TELEVISION SATELLITE DISH (OPTIONAL)

The RV may be equipped with a TV satellite dish control system (Figure 6-1) to permit access to satellite television. If so, the satellite will be equipped with a standard, non-high definition Direct TV receiver.

If your motorhome is equipped with an optional satellite dish it is capable of receiving High Definition (HD) satellite signal from Dish Network. However, you must subscribe to HD service and install a HD receiver. Factory installed satellite dishes must have a HD receiver in order to obtain a clear picture. Your satellite dish will not receive High Definition programming from Direct TV; however, it is capable of receiving standard definition programming from Direct TV's Satellite 101.

Figure 6-1: The dome satellite on top of the motorhome can be raised allowing easy access to change switches to a new satellite provider.

Follow the directions in the Owner's Manual for this dish-control mechanism to obtain the best orientation of the satellite dish for desired television reception. The Allegro is equipped with an in-motion satellite dish.

TELEVISION SETS

Your motorhome is High Definition (HD) ready and is capable of receiving channels that are broadcasting in High Definition.

In order to receive a clear picture from your satellite dish, you must install a high definition receiver and subscribe to high definition (HD) service. Your motorhome does not feature a manual switching box, therefore in order to change from satellite to DVD or TV antenna, please follow the directions listed below:

• To change the mode of your television, press "INPUT" on your remote control. Then select TV, DVD, or Satellite, and press "OK."

Figure 6-2: Front cabin overhead television set

NOTE: The booster must be "on" for ANT (a green light will appear) and "off" for the cable. The booster is located in the front-right cabinet of your motorhome.
The television sets (Figure 6-2) are located in different areas of the motorhome.All TV sets are High Definition.

The televisions are powered by 120-volt AC electricity; therefore, the motorhome must either be plugged into an external source of AC power or using on-board power from the generator. An optional inverter would also permit the 12-volt DC power to be converted into 120-volt AC for the television(s).

Detailed operation of the television(s) is provided in the accompanying owners manuals found in the Owner's Information Package included with the motorhome.

INFRARED REPEATER

The Allegro Breeze features an infrared repeater which enables the owner to utilize the satellite remote control from various areas of the coach. An infrared repeater will be located in the bedroom and by the overhead TV located in the driver's area. If your Allegro Breeze has the optional outside entertainment system, this feature will be located on it also.
To utilize the infrared repeater, locate the one inside the cabinet that contains the DVD player. Peel the adhesive backing from the back of the infrared repeater and line the infrared repeater against the satellite receiver's infrared repeater. This will allow the infrared repeater to operate when the satellite remote control is directed toward the infrared repeater situated next to the TV.
You will now have the convenience of changing the satellite receiver channels from various areas of the coach.
NOTE: The infrared repeater will not work with a Dish Network receiver.

SURROUND SYSTEM

To set up the surround sound system in your motorhome:

1. Press input
2. Scroll up to “Speakers”
3. Turn speakers to “External Speakers,” then press “EXIT”
4. Use your Bluray control, press the “POWER” button
5. Press the “Home” button
6. Got to “EXT IN,” press OK
7. Go to “DIGITAL IN,” press OK
8. To quit using the surround sound option, press “INPUT” on the TV remote control
9. Scroll up to “SPEAKERS” and turn them to TV Speakers, then press “EXIT”

Figure 6-3: Overhead surround sound speaker

BLURAY/DVD PLAYER

Figure 6-4: DVD Player

The standard DVD/Bluray player is located in a cabinet on the passenger’s side above the bed in the rear of the coach. The player allows accessibility to play DVDs, Bluray, iPods, and other electronic devices as well as viewing photos and playing music.

Detailed operation of the player is provided in the accompanying manuals found in the Owner’s Information Package included with the motorhome.

ALLEGRO Breeze

CABINETS & FURNITURE

Chapter

7

CABINETS

Your Allegro Breeze contains cabinetry installed throughout the entire motorhome from the driver's area, through the kitchen/dining areas, and back into the bedroom.

Figure 7-1: Living room cabinets

The cabinetry has been designed and built to provide ample storage space, to be easily accessible, and to be conveniently located to support the areas of concern.

Construction of these cabinets incorporates various hardwoods, raised panels, cabinet doors, and supports. Door pulls, handles, and knobs are installed in a style complementing the particular décor of each Allegro Breeze so that an aesthetically-pleasing, as well as fully functional, storage capacity is realized.

For the many floor plans available in the Allegro Breeze product line, cabinet design (Figure 7-1) has been optimized to provide maximal storage for each and every floor plan available. Accordingly, the Allegro Breeze can readily accommodate the routine materials, supplies, and customer-specific items desired for any travel requirements.

Figure 7-2: Kitchen countertops and backsplash

These cabinets are designed to contain stored supplies quite securely during travel to minimize or eliminate the possibility of shifting or spilling of cabinet contents during travel. But, when the motorhome is parked, all stored items are readily available in the cabinets for the convenience of the users.

As the storage requirements will vary somewhat from

one floor plan to another, general observations can be made about the Tiffin-supplied cabinetry which may or may not be applicable for your specific Allegro Breeze configuration.

Cabinets are provided in the kitchen/dining area to accommodate the routine cooking utensils and groceries normally desired for travel. Storage space within these cabinets has been designed to accommodate the typical sizes and configurations of food supplies (e.g., cereal boxes, condiments, canned goods, bottled liquids) normally taken on travel trips.

Based on Tiffin Motorhomes' extensive experience with travel requirements of the seasoned motorhome users and from Tiffin Motorhomes' own research and development in cabinet-design requirements, the cabinets offer the greatest storage capacity possible. In the bathroom and bedroom, additional cabinets are available for storage of sundries and toiletries specific to these areas.

In the kitchen, a color-coordinated countertop is provided on top of the floor-mounted cabinets. To maintain the appearance of the countertop, clean with a damp cloth. If spotting occurs, clean the countertop with a damp cloth and a mild liquid soap. Should some dried-on residue still persist, let a damp cloth moistened with the liquid cleaner stand directly on top of that residue for 15-30 minutes to loosen the residue, then clean that spot accordingly.

Please note that strong chemicals, solvents, and cleaners (e.g., oven cleaner) may damage the surface; so do not use any products not specifically designed for countertop cleaning.

The countertop (Figure 7-2) may be physically damaged, too, if proper care is not taken. Do not cut anything (e.g., vegetables, fruits) directly on the countertop; rather, use a cutting board on top of the countertop to provide necessary protection. Excessive heat may also damage the countertop; therefore, any pots or pans taken directly from the range or oven should not be placed directly on the countertop; rather, use trivets or some other form of fireproof heat insulators to hold very hot pots or pans on the countertop.

All drawers are equipped with metal slides to provide additional load-bearing strength for the drawers and to permit effortless opening and closing of those drawers, even when they are fully loaded. These metal guides have a slight "locking" action, when closed. To open those drawers, slightly lift up on the drawer handle and then pull the drawer open.

To close, push the drawer closed until it "clicks" back into place (i.e., the locking action is engaged).

As this cabinetry is typically of furniture-grade quality, any commercial furniture polish or cleaner can be used. Do not try to soak these wooden surfaces with any water or any other liquid; be sure to wipe up spills or residues of any fluids that contact these surfaces to preclude any staining or discoloration of the cabinet surfaces.

FURNITURE

KITCHEN, LIVING & DINING AREAS

On all the various floor plans of the Allegro Breeze, a built-in dinette booth (Figure 7-3) is standard; a free-standing table is optional.

This dinette provides additional storage under the seat area of the booth, in addition to providing additional sleeping facilities.

Figure 7-3: Sofa booth

The sleeping area is realized by lowering the dinette-table top and rearranging the seating cushions.

Specific directions for converting the booth dinette into a bed are as follows:
To convert the sofa booth into a bed, unlatch the two levers on the dinette table. Push the table down until the curve of the table is just below the sofa curve. There will be an additional leather cushion that you will place over the table to form the completed bed.

Figure 7-4: Sofa

The living room contains a standard sofa (Figure 7-4) which converts into a bed, as well.
The driver's seat is an electric-powered, six-way power seat (i.e., movement: up, down, forward tilt, reverse tilt) having swivel features (and recline features for the passenger seat only).

When the motorhome is parked, the driver's seat can be swiveled to face into the living room.

To swivel this chair, first extend the slide-out room (see Chapter 10 for additional detail). Then move the chair backwards as far as possible to gain clearance from the steering wheel.

Now the chair can be swiveled without interference. The control switch for the driver's chair is located on the left-hand side in front of the power base controls. In a comparable manner, the passenger's seat is also an electric-powered, six-way seat having essentially the same controls as that of the driver's seat and it is operated accordingly.

Figure 7-4: Both the driver's and passengers chairs swivel to face the living area of the coach

BEDROOM AREA

If a décor-coordinated, quilted bedspread with accessorized pillow shams and accent pillow(s) (Figure 7-6) are included with the bedroom suit, it is recommended that the bedspread be only dry-cleaned to preserve the quality of the bedspread for the longest time possible.

Treatment of the bedspread with any of the stain-resistant sprays (e.g., Scotchgard, etc.) will also make the bedspread more resistant to the possibilities of stains and fabric damage and, thus, provide many years of dependable service.

Figure 7-5: Bedroom decor

ALLEGRO Breeze

STRUCTURAL FEATURES

Chapter

8

CHASSIS FEATURES

The Powerglide chassis of your Tiffin Motorhomes Allegro Breeze was built and warranted by Tiffin. The operating instructions for that chassis are included in the Chassis Owner's Manual which is provided with your Allegro Breeze and is a part of the Owner's Information Package furnished to you by your Tiffin Motorhomes dealership.

Before you begin using your Allegro Breeze please read and follow all recommendations for the proper care, operation, and maintenance of the chassis—this will assure you of pleasant, trouble-free use of vehicle. Should you have any questions about the chassis, however, you should contact your chassis manufacturer as noted in the literature described earlier.

Typical chassis items covered under warranty by the chassis manufacturer
Steering wheel
Steering system
Instrument panel
Engine
Transmission
Chassis frame
Axles
Fuel tank
Suspension and springs
Tires and wheels
Brakes
Exhaust system
Leaf springs

ALLEGRO Breeze

ELECTRICAL FEATURES

Chapter

9

GENERAL INFORMATION

There are two electrical systems in your Allegro Breeze motorhome. These are the 12-volt DC (VDC) system and the 120-volt AC (VAC) system. Most standard appliances require the 120-VAC system, while the majority of the lighting systems used in the Allegro Breeze use the 12-VDC electrical system.

The electrical power for the 12 VDC system is supplied by the batteries of the Allegro Breeze. Those batteries are charged by a power converter. The alternator also charges the batteries when the engine is running.

The electrical power for the 120 VAC is supplied by the power cord when the Allegro Breeze is connected to an external power source or when the on-board electrical generator is in operation. The converter/inverter can also supply 120 VAC electrical power (to limited outlets and limited appliances)—the inverter transforms the 12 VDC electrical power from the batteries into the 120 VAC electrical power for the basic appliances.

CAUTION

Failure to turn off the 120 VAC appliances when starting or stopping the generator may damage the transfer switch and/or electrical appliances.

To connect the Allegro Breeze to an external source of 120 VAC electrical power, it is first recommended that all of the circuit breakers are in the "off" position. This is done to prevent any power surge upon connecting the motorhome to the external power source. Then unwind the power cord from the electrical compartment located in the compartment behind the driver's-side rear tires. The standard, flexible, power cord supplied with the Allegro Breeze is designed to handle up to 50 amperes. Make sure that the pins in the male end of the plug are oriented correctly so they match the power cable, and they are in good condition (i.e., aren't bent or damaged).

If there is a circuit breaker switch at the "plug" end of the power cord, that breaker should be turned "off" before making the connection. Insert the plug into the mating outlet and then turn the circuit breaker "on." Close and lock the electrical compartment door to protect the contents and to keep them clean and dry. Close the cover on the power box, if so equipped, to avoid an unintentional disconnection and to keep the contents clean and dry. Then switch the main breaker to the "on" position.

When properly connected, the 120 VAC system provides power to all the 120 VAC circuits and outlets when the main breaker is turned "on."

ELECTRICAL CAUTIONS

• Careless handling of electrical components can be fatal. Do not touch or use electrical components or appliances while feet are bare, while hands are wet, or while standing in water or on wet ground.

• Do not touch an extension cord to the utility power cord.

• Avoid overloading circuits and replace fuses or circuit breakers with those of the same size and amps only. DO NOT use a higher rated fuse or breaker.

• Do not plug the utility power cord into an outlet that is not grounded.

• Do not adapt a plug to connect to a receptacle that it is not designed for.

• Be sure that all electrical appliances used inside the motorhome contain three-prong plugs for proper grounding.

• Use caution when handling or working near electrical storage batteries.

• Always remove jewelry and wear protective clothing and eyewear when working on an electrical matter.

CIRCUIT BREAKER BOXES

For the Allegro Breeze, the 120 VAC and 12 VDC breaker boxes (Figure 9-1) are located in the bathroom.

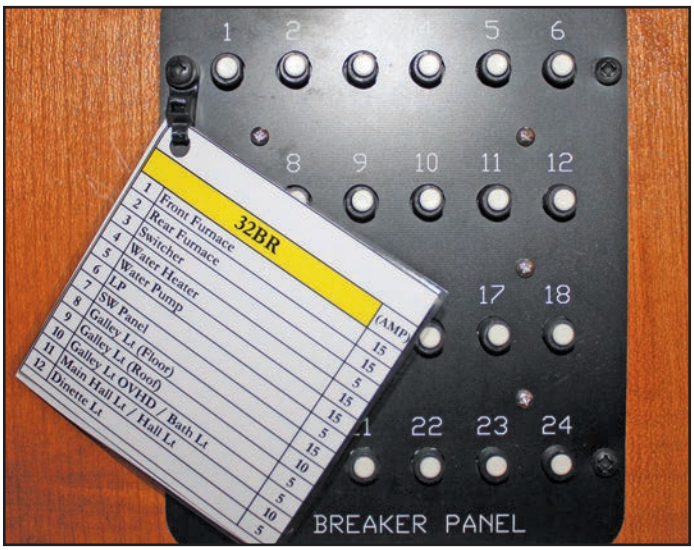


Figure 9-1: Circuit breaker box

The circuit breakers and fuses are installed to protect the electrical system of the Allegro Breeze from any overloads. Do not attempt to change the electrical circuitry or to add appliances yourself.

Please consult an authorized Tiffin Motorhomes Dealership or Tiffin Motorhomes, Incorporated in Red Bay, Ala., to determine whether any changes you desire are appropriate and acceptable.

Tiffin Motorhomes' qualified staff of electricians can readily determine whether any changes sought (e.g., CB radio, amateur radio, satellite television receiver, personal computer system) are possible or not and can advise you onthe matter.

The 120 VAC power supplied from shoreline or generator enters the "MAIN" circuit breaker located on the left side of the AC breaker box. This double circuit breaker will disconnect power from all 120 VAC appliances when tripped. Each circuit breaker has a label giving an indication of the device it is passing power to. The typical items powered from the AC circuit breaker box are: air conditioners, water heater, microwave, engine preheat, AC receptacles, televisions, Blu-ray player, converter/inverter, and the optional refrigerator. Check these circuit breakers if a 120 VAC powered device is not working.

The 12 VDC circuit breakers are located on a separate panel near the AC breaker box. There is a placard attached to the panel giving an indication of which items are powered by each circuit breaker. The items that are powered from the DC circuit breaker panel include: all interior and decorative lighting, powered roof vents, monitor panel, thermostats, furnaces, water pump and heater, and passenger side console.

A multiplex based system with power distribution modules supply the 12VDC functions for the chassis functions. These modules and associated circuit protecting fuses/breakers are located in the driver's side front and passenger's side rear compartments.

Another panel of circuit breakers is located in the passenger side, external, rear compartment which contains resettable breakers for the following systems: Slide-outs, 12 VDC disconnect system, storage box lights, and solenoids.

AUXILIARY START SWITCH

Figure 9-2: Auxiliary start switch

The auxiliary start switch (Figure 9-2) is located on the switch panel to the left of the steering wheel in front of the driver's-side console box (Figure 9-3).
This switch connects the Allegro Breeze coach batteries to the chassis batteries—this allows the chassis batteries to "borrow" power from the coach batteries to assist in starting the engine.

If the chassis batteries cannot start the engine by turning the ignition key, hold down the battery-boost switch for at least 60 seconds and retry starting the engine.

Figure 9-3: Driver's side console

When attempting to use the auxiliary start switch function, it is recommended that the owner press and hold the switch for about 60 seconds before trying to start the engine. This gives the two sets of batteries (house and chassis), a chance to equalize prior to engaging the starter. The multiplex system that controls most chassis functions will need to reach optimal voltage range to insure proper operation as well.

BATTERY INSPECTION AND CARE

Figure 9-4: House batteries

The 12-VDC electrical-power system consists of two 6-VDC batteries wired in a series to provide a final 12 VDC system (Figure 9-4) providing up to 200 Ampere-hours (A-hr) of service.

It is necessary to recharge the batteries occasionally to increase the operational lives of the batteries. It is also necessary to check the external condition of the batteries on a regular basis.

Look for cracks in the battery case and cover. Check the vent plugs and replace them if they are cracked or broken. Keep the battery clean.

Since accumulations of dirt and acid residue around the battery terminals may provide an electrical path for discharging the battery, the area around the terminals should be cleaned periodically.

You can use an old toothbrush and a sparse amount of a diluted solution of baking soda (sodium bicarbonate) and water (distilled or de-ionized, preferred; tap water, acceptable) to clean and neutralize any acidic build-up around the battery terminals. If this is done and there is any foaming on the top of the battery, this indicates that acidic residues are being neutralized.

Rinse the cleaned areas thoroughly with distilled or de-ionized water (tap water is okay, too). Avoid getting the baking-soda solution into the battery fill plugs to each battery cell; this would drastically reduce the effectiveness of the battery (by neutralizing the sulfuric acid in the battery cells) or, worse, "kill" the battery.

Dry the battery cables and terminals to prevent corrosion. To protect those terminals further, use a plastic ignition spray on the terminals. Do not use grease on the terminals, especially on the metal-to-metal connections, as grease may act as an insulator and keep the battery electrical power from entering the cables.

If the Allegro Breeze is to be stored for an extended period of time, the 12 VDC battery system should be disconnected. This will prevent unnecessary drain and corrosion of the batteries and their terminals. The chassis disconnect switch, which is located in the panel directly above the chassis batteries in the rear electrical compartment, should be turned off as well.

Over time, the batteries will lose some of the water used with the sulfuric acid in the batteries. Following manufacturer's recommendations as found in the Owner's Information Package, periodically check the fluid levels in all the cells of the batteries (be sure to use safety eyewear during this process) and fill those that are low with water (distilled or de-ionized water is preferred; tap water is okay). Don't overfill the cells; follow the filling directions exactly.

This battery checkup should be done on a regular basis to realize the fullest service possible from the batteries over the longest time possible.

The house batteries are located beneath the entrance door step well. Access can be gained by lifting the middle step tread.

NOTICE

Disconnect the 120 VAC electrical power cord and the negative terminal from the coach batteries BEFORE working on the Allegro Breeze electrical system.

NOTICE

If the Allegro Breeze ever requires any welding operations on the frame, first disconnect the chassis batteries. Failure to do so will destroy all of the chassis computer system.

WARNING

Remove rings, metal watchbands, and any other metal jewelry before working around batteries. If any metallic object (tool, jewelry, etc.) contacts the positive battery terminal or any connection made to that terminal AND also contacts the negative terminal or any of its connections, a SEVERE ELECTRICAL SHORT will occur which could result in an explosion, fire, and/or personal injury. Lead-acid batteries contain diluted sulfuric acid which can be dangerous; avoid direct contact with any battery fluids. Wear eye protection.

120 VOLT (VAC) AC RECEPTACLES

Your Allegro Breeze motorhome is equipped with several 120 VAC receptacles (Figure 9-5) located throughout the interior of the motorhome. These 120 VAC receptacles are of the "three-prong" variety; the third prong being a grounding pin which provides adequate grounding to protect one from any electrical shock.

Figure 9-5: 120 VAC receptacle

For these receptacles to work properly, do not use an adapter, cheater, or extension cord which defeats the function of the grounding pin. For the same reason, never remove or bend away the ground prong or pin from any three-prong AC plug so that it would fit a two-prong AC receptacle (i.e., an ungrounded AC receptacle).

Never operate the Allegro Breeze if there is an electrical short present, as an electrical short may deliver an electrical shock to anyone coming in contact with the exterior of the unit.

If you should feel even the slightest of electrical shock, immediately disconnect the unit from the 120 VAC power source and locate the electrical fault (i.e., typically, it is a break in the grounding circuit).

Do not reconnect the 120 VAC power until after that electrical fault is fixed—the grounding circuit must be continuous from the frame to the distribution panel, to the power cord, and to the earth ground so that electrical-shock protection is realized.

12 VOLT DC (VDC) RECEPTACLES

Your Allegro Breeze Motor Home is equipped with a 12 VDC receptacle conveniently located on the dashboard or bulkhead (i.e., the "black" connector plate in the figure). This 12 VDC receptacle (Figure 9-6) can be used for providing power to various items, such as cellular phones or personal computers or portable communications equipment. This receptacle is usually found on the bulkhead in front of the passenger's seat so that it is conveniently available.

Figure 9-6:
12 VDC receptacle

USB RECEPTACLES

The Allegro Breeze is equipped with USB ports conveniently located on the front dashboard and in the bedroom area as well as on the passenger console. These ports allow for easy access when charging cell phones, laptop computers, iPods, iPads or other tablets.

Figure 9-7:
USB receptacle

GROUND-FAULT-CIRCUIT-INTERRUPT RECEPTACLES

In the bath area, there is a 120 VAC GFCI receptacles (Figure 9-8) which provides greater protection against inadvertent electrical shocks.

These specialized GFCI receptacles provide both overload and short-circuit protection for the user. The electrical receptacles located in the slide-out are wired through the kitchen GFCI. The exterior receptacles are wired through the bathroom GFCI.

If an appliance plugged into a slide-out or exterior receptacle is not working, check for a tripped GFCI in the kitchen or bathroom.

Figure 9-8:
GFCI receptacle

The GFCI should be tested at least once a month. The 120 VAC electrical system must be "on" for the

GFCI to be tested.

To test the GFCI, the reset button needs to be pushed in fully before starting the test. Push the test button. This should cause the reset button to pop out which means the protected circuits have been disconnected and ground fault detection is working properly. Push the reset button back in until a "click" is heard—this will reactivate the protected circuit. If the receptacle is working properly, the reset button will remain in the "in" position.

The GFCI could be tripped by a various number of issues, including the use of a hair dryer, flat iron or other small items being used at the same as the microwave oven. Similarly, using two crock pots, etc. on the same circuit could cause a GFCI to trip.

CONVERTER/INVERTER

A converter/inverter (figure 9-9) is provided as a standard feature on the Allegro Breeze. This converter/inverter provides these three basic functions:

1. Convert 120 VAC power into 12 VDC power when 120 VAC is available. The converter will create 12 VDC to charge the house batteries when 120VAC power is available from shoreline or the generator.
2. Invert 12 VDC power into 120 VAC power when 120 VAC is not available. The inverter can create 120 VAC to power the entertainment system (e.g. TVs, Blu-ray player) and optional residential refrigerator when 120 VAC power is not available.
3. Transfer 120 VAC power to the inverter loads (e.g. entertainment system, optional refrigerator) when 120 VAC power is available.

Figure 9-9:
Converter/Inverter

The converter/inverter will transfer or pass 120 VAC power to its loads when plugged into shoreline or running the generator.

The converter/inverter is conveniently located in the front passenger-side compartment. Do not store items around the inverter as these items could cause accidental electrical short circuits or obstruct the cooling fan leading to overheating.

There is a three position selector switch on the converter/inverter labeled "AUTO/REMOTE", "DC OFF", and "CHARGER ONLY." This switch should be set to "AUTO/REMOTE" to allow the inverting function to be enabled. The inverting function can then be enabled/disabled by the "12 VOLT" switch located just inside the door. Inverting is enabled when this 12V disconnect switch is "ON" and disabled when the switch is "OFF".

If the inverting function is not needed or infrequently used, then the selector switch on the converter/inverter can be set to "CHARGER ONLY." This setting will disable the inverting function, but it will still allow the converter to charge the batteries when 120 VAC is available.

The 12 VDC wiring for the converter/inverter comes from the circuit breaker located underneath the step cover next to the house batteries. Check this circuit breaker if converter/inverter functions are not working.

The 120 VAC wiring for the converter/inverter comes from a circuit breaker in the circuit breaker box. This is the 120 VAC power into the converter/inverter. There is also 120 VAC wiring from the converter/inverter returning to a circuit breaker in the circuit breaker box. This is 120 VAC power out of the converter/inverter used to power the inverter loads.
Check these circuit breakers if converter/inverter functions are not working.

There are two circuit breakers located on the converter/inverter. One of the circuit breakers is for the 12 VDC charging circuit, the other circuit breaker is for the 120 VAC output. Check these circuit breakers on the converter/inverter if there are functions not working.

ELECTRICAL GENERATOR

The electrical generator (Figure 9-10) is located in a compartment in front of the motor home between the chassis rails. Access to check the generator's fluid levels can be gained by releasing the hood latches.

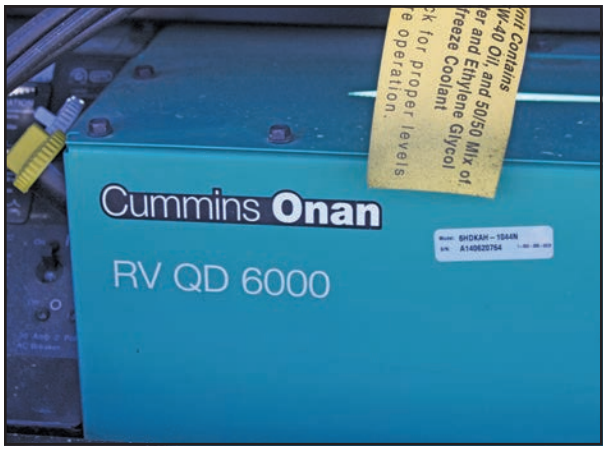


Figure 9-10:
Electrical generator

Prior to starting or stopping the generator, make sure that all the 120 VAC appliances are turned "off." After the generator has been started, wait until the transfer switch has connected before turning "on" any of the appliances.

The generator can be started from either the remote-start switch located on the dash or directly at the generator itself. The hour meter installed on the generator records the number of hours of operation of the generator motor—this elapsed time is needed for observing necessary maintenance schedules on the generator.

For more detailed operating instructions and to determine necessary preventive-maintenance schedules and procedures, review the manufacturer owner's manual.

CAUTION

Failure to turn "Off" the 120 VAC appliances when starting or stopping the generator may damage the transfer switch and/or electrical appliances.

AUTOMATIC TRANSFER SWITCH

The automatic transfer box switches 120V AC power from shore or generator to the coach's main distribution panel. The transfer box has a delay of around three seconds before switching power to shore, and a delay of around 30 seconds before switching power to the generator.

If the unit is plugged into shore but no power to coach then make sure the shore outlet has power. If power is present this may indicate the unit is sensing an open neutral condition. Start the generator, if the power is restored, then either the shore plug or the outlet may be defective (the neutral line may be broken.)

If there is no power to coach from shore or generator then check the generator circuit breaker. If the circuit breakers are not tripped in the generator or the coach, the transfer box may need to be replaced. For more detailed information on the automatic transfer switch, please refer to the specific owner's instructions found in the owner's information package.

CAUTION

Service to this box is to be done by a qualified technician. DO NOT attempt to remove cover unless shore cord is unplugged and generator is off.

NOTICE

Be sure air conditioning units are off before connecting or disconnecting to or from shore power.

RE-SETTABLE CIRCUIT BREAKERS

As needed, manually reset the circuit breaker or breakers as shown in the accompanying figure. Be careful when working around these connections as an accidental, electrical short to ground (i.e., momentarily connecting the "positive" or "hot" terminal to any part of the chassis) can be hazardous and harmful.

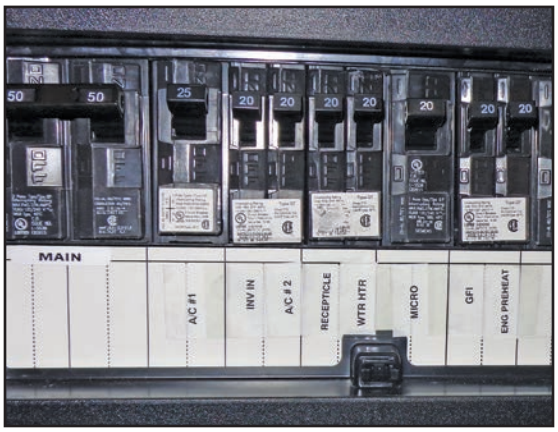


Figure 9-11:
Circuit breakers

FUSE BLOCKS

Some of the electrical circuitry within the motorhome is protected by various fusing systems. Some of these fuse blocks are immediately accessible on the driver's side front exterior compartment. These fuse blocks protect some of the major electrical systems of immediate concern to the driver.

Should there be any electrical failure of these components or systems, the first diagnostic or troubleshooting procedure should be to check the fuses and have available replacements to replace any blown fuses, as may be warranted.

Also the Allegro Breeze contains a computerized diagnostic center usually attached to the steering column under the dash. This center permits a computer to be connected to the on-board diagnostic center monitoring many of the operating functions and parameters of the engine so that the current operating status of the engine can be determined and any anomalies or problems may be noted. This diagnostic tool enables the motorhome owner to maintain an updated status of the engine so that the overall reliability of the motorhome can be maintained.

WARNING

Never replace a fuse with a fuse rated larger than that which originally came from the factory. To do otherwise will cause serious damage, overheating of the wiring, and possible ignition of nearby materials resulting in a fire.

SEVEN-PIN TOWING CONNECTOR

Your Allegro Breeze is equipped with a standard, 7-pin connector near the towing hitch at the rear of the motorhome to supply the necessary circuitry to control a towed vehicle.

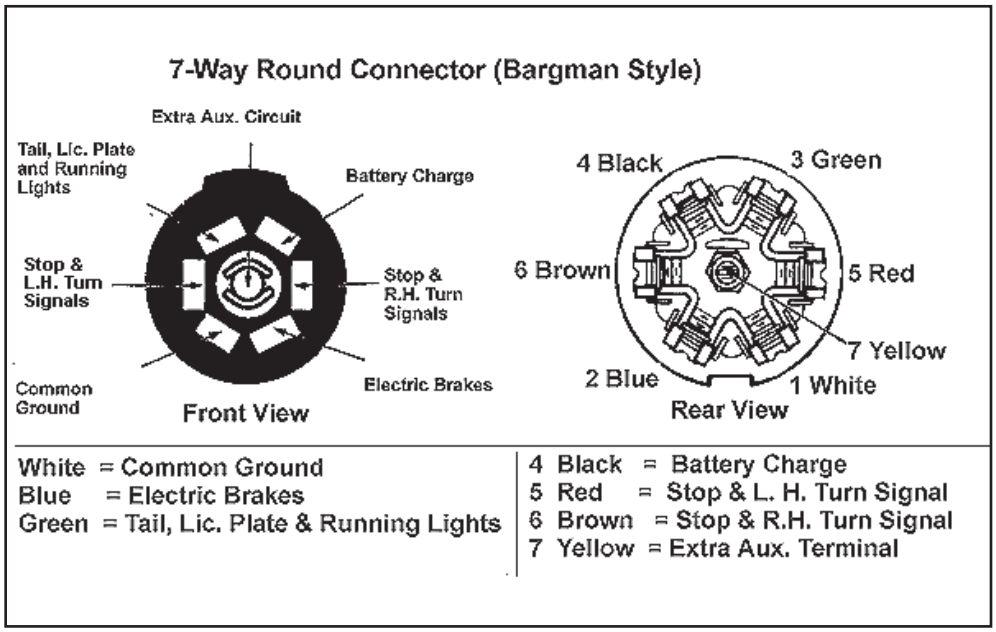


Figure 9-12:
Seven-Pin towing connector

The wiring of that connector is shown in the accompanying diagram (see Figure 9-12).

Make sure that any cable from the vehicle to be towed is wired correctly to mate properly with the connections shown in the connector. If in doubt about proper wiring, have a qualified service technician prepare and install the necessary cable to mate with the 7-pin connector on the motor home to assure proper operation subsequently when any vehicle is actually towed by the motorhome.

When the towed vehicle is uncoupled from the motorhome and the cable is disconnected from the 7-pin connector, be sure to close the spring-hinged cover plate on the connector to protect the contact pins from dirt or debris. In a similar manner, protect the cable end from similar damage, weather, or debris—one such method could be to place the connector end in a heavy-gauge plastic bag (e.g., polypropylene, polyethylene, etc.) and secure the bag tightly around the cable with a stout elastic band or tape and then mount the secured cable in a manner to keep it both from mechanical damage and water intrusion.

When the towed vehicle is again coupled to the motorhome via the towing hitch and the cable is again connected to the 7-pin connector, make sure the resultant connection is tight and solid so that the connection won't jar loose during use. Several supplemental methods to secure that connection have been used; some of which include securing the connection with a strong rubber band or with Velcro-type fasteners to provide a supplemental mechanical backup to the actual electromechanical connection. Should a conversion adapter to convert the round, seven-pin connector to a flat, four-pin connector be needed; such an adapter may be purchased from any RV after-market store.

ALLEGRO Breeze

SLIDE-OUT FEATURES

Chapter

10

SLIDE-OUT OVERVIEW

CAUTION

BEFORE ACTIVATING THE SLIDE-OUT FEATURES, please read the slide-out room instruction manual first. Additionally, the motor home must be parked and the leveling jacks must be used to level the motor home PRIOR to activating the slide-out features and the ignition switch must be in the "on" position.

GENERAL CONSIDERATIONS

NOTICE

The Slide-Out Room requires semi-annual inspection (i.e., every six months) to assure that the slide-out mechanism is properly aligned and functioning correctly. Please make sure that this inspection is performed every six months to correct any possible misalignments.

The slide-out-room feature is actuated by a readily-accessible, rocker switch (Figure 10-1). The rocker switch must be manually held down in the desired position (i.e., either "in" or "out") to activate the desired action of the slide-out room and continue to be held down until the desired action is concluded.

Figure 10-1:
Slide-out switches

Releasing the rocker switch before the slide-out is fully extended or retracted will stop the slide-out at some intermediate position.

NOTE: The slide-out switch will only operate when the ignition switch is in the "on" position and the park brake is engaged—there is an interlock which keeps the slide-out mechanism from operating when the ignition is "off."

OPERATING PRECAUTIONS

Before the slide-out-room mechanism is to be used, make sure the motorhome is parked, the leveling process has been properly completed. Verify that no obstacles (e.g., branches, trees, telephone poles, power/water hookups, trash bins, and the like) are within a five-foot space envelope of that slide-out room to preclude damaging the slide-out room when it is finally deployed.

NOTICE

Before attempting to extend the slide-out room, check outside and make sure that there is at least a five-foot clearance around the area where the slide-out room will be extended and be sure the driver's and passenger's seats are moved to the forward position.

EXTENDING THE SLIDE-OUT ROOM

1. All windows in the slide-out room (Figure 10-2) must be closed and secured before the slide-out room is to be extended or retracted. Also any loose materials or possible obstructions should be removed from the immediate, slide-out room area.

Make sure that the motorhome has been leveled, that the battery is fully charged and connected to the electrical system, and that the ignition switch is "on" and the engine is running before attempting to use the slide-out features.

Figure 10-2:
Typical slide-out fully extended

2. Verify that there are no obstructions outside which may interfere with the operation of the slide-out room.

3. Prior to moving the slide-out room in either direction, make sure that the driver's and passenger's chairs are moved forward into the driving area as far as possible and locked into position.

4. Push the "out" section of the rocker switch; allow the slide-out room to go to its fully extended position.

5. Release the rocker switch (this locks the room into position).

RETRACTING THE SLIDE-OUT ROOM

1. Before attempting to move the motorhome, the slide-out room must be fully retracted.
2. Verify that the 12 VDC system is fully charged and connected to the electrical system.
3. Make sure all personal equipment and any children are away from the slide-out.
4. Make sure all cabinet doors around the slide-out areas are closed.
5. Push the "in" section of the rocker switch; allow the slide-out room to go to its fully retracted position.
6.. Release the rocker switch (this locks the room into position).

NOTICE

If the slide-out room doesn't move when the rocker switch is depressed, check the following:

- Make sure the ignition system is turned "on."
- Make sure the park brake is engaged.
- Make sure the battery is fully charged and connected.
- Make sure the slide-out breakers haven't been "tripped." These are located in the storage box with the inverter or converter.

ALLEGRO Breeze

EXTERIOR FEATURES

Chapter

11

TOWING HITCH

On the rear of the Allegro Breeze can be found a Class 2, 5,000-pound towing hitch (Figure 11-1) capable of handling a tongue weight of 500 pounds.

This hitch is installed for towing a passenger car to be used when the vehicle is parked. The wire connector installed with this hitch is a standard, seven-pin connector.

For more information on the connector, please see Chapter 7 of this Owner's Manual.

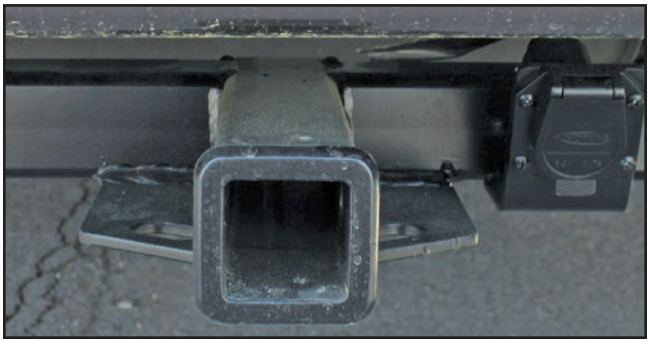


Figure 11-1:
Towing hitch

EXTERIOR SIDES

Figure 11-2:
Exterior of Allegro Breeze

The sides (Figure 11-2) of your Allegro Breeze are constructed of gel-coated fiberglass. To add to this feature, the end caps are also gel-coated fiberglass.

To clean these fiberglass surfaces, **only use warm water and a mild cleanser**; gently wash with soft cloths. Use of stiff bristle brushes or other harsh abrasives may cause scratches in the fiberglass surfaces.

NOTE: Tiffin Motorhomes is **NOT** responsible for the weathering/oxidation of gel-coated surfaces.

Lighted storage compartments are located on the exterior sides of your Allegro Breeze. These external compartments provide ample, additional space for your belongings while you are traveling.

When stowing materials in these storage compartments, try to "balance" the resultant weight load from front to rear and from side to side—this will keep the center of gravity of the motor home essentially unchanged and should not adversely affect the handling characteristics of the motor home when it is in motion.

SECURITY LIGHTS

On the Allegro Breeze, exterior security lights (Figure 11-3) are standard features.

A light is installed on the passenger side of the coach to help light that side of the Allegro Breeze for added protection.

This light can serve as a "porch light" when the motor home is parked and the awning is deployed so that various activities (e.g., sitting outside, grilling, visiting) at dusk and later can be enjoyed by the motorhome owners and their guests.

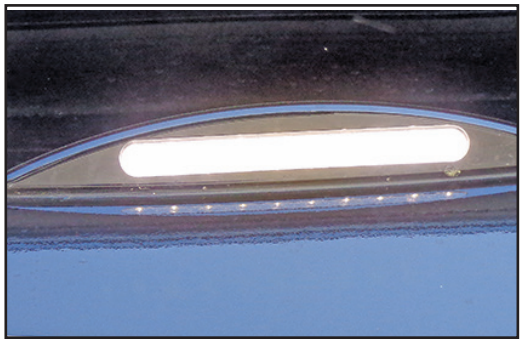


Figure 11-3:
Exterior security light

ROOF & LADDER

Figure 11-4:
Roof ladder

The Allegro Breeze is manufactured with a fiberglass roof accessed by a ladder (Figure 11-4).

Proper care and routine maintenance of your roof will assure many years of trouble-free performance. Please see Chapter 14 for details on recommended cleaning instructions.

On the Allegro Breeze, a roof ladder (rated capacity: 200 pounds, maximum) is a standard feature. The ladder is typically used to permit easy access to the roof for routine maintenance and periodic inspections.

CAUTION

Do not exceed the maximum rating of the ladder (i.e., 200-pound load limit).
Do not attempt to walk on the roof either while it is wet or when condensation is present from the air-conditioning system, as that surface would be quite slippery.

ELECTRIC STEPS

Figure 11-5:
Electric steps

The Allegro Breeze is equipped with electric door steps (Figure 11-5).

The switch (Figure 11-6) to operate these steps is located in the passenger console box. When the power switch for the steps is in the "on" position, simply open the door and the steps will automatically extend.

Figure 11-6:
Entrance step switch

Detailed operation for the electrical, double-entrance, door steps is as follows:

1. Turn the step power switch "on."
2. Close the door. The step should retract and lock into the UP position.
3. Open the door. The step should extend and lock into the DOWN position.
4. Turn the step power switch "off." The step should remain in an extended position when the door is closed. Turning "off" the power with the step retracted will hold the step in a retracted posi tion, as well.
5. With the step extended, turn the step power switch "off" and close the entrance door. Turn the vehicle ignition switch "on." The ignition override system will go into effect and the step will automatically retract.
6. With the step switch in the "on" position, turn the vehicle ignition switch "off" and open the door. The step will extend and lock in the DOWN position.
7. This feature is only operative the first time the door is opened after the vehicle ignition switch is turned "off." When the ignition switch is "on," the step will always activate with the door move ment, regardless of the position of the step power switch.

When the electric steps are fully retracted and the motor home is being made ready for travel, be sure to remove the cover over the stairwell (Figure 9-9) by lifting it by the handle and the cover will fold. There is a hook type enclosure that the folded cover will securely fasten to when not in use.

Other exterior features include optional power-assisted awnings (patio awning, door awning, or both). If such are available, they can be controlled from the switch console located in the stairwell of the Allegro Breeze (see Figure 9-8). Additionally, a patio light switch and a cargo light switch may be used to provide illumination on the patio side of the motor-home exterior and in the exterior storage compartment areas under the motorhome, as needed.

CAUTION

If the motorhome is driven with the step in the extended position, there is the possibility of causing major damage to both the step and the motorhome.

NOTICE

If the door is opened and closed without allowing the step to extend fully and lock in the "DOWN" position, the step will retract and lock in the "UP" position. When the door is re-opened, the step will not extend. The power switch must be turned "on" for the step to extend.

CAUTION

Always be sure to "look before you leap!" When opening the entrance door from the inside, be sure that the step has fully deployed before trying to step outside to avoid falling and possible injury.

MIRRORS

Figure 11-7:
Mirror

This motorhome is equipped with convex, remote-controlled, exterior, rear-view mirrors (Figure 11-7).

Always adjust the mirrors for maximum rear visibility prior to driving. If another driver is to drive, be sure the mirrors are readjusted to accommodate the second driver.

The mirrors are adjusted by using the multi-directional switch located on the dashboard. Select the mirror to be adjusted by pointing the arrow in the direction of that mirror.

Move the control in the direction of movement desired to obtain the best view for that mirror. The adjustment control moves the top half of both mirrors. The bottom half of each mirror is convex and is adjusted manually.

Detailed instructions for these manual adjustments can be found in the manufacturer's literature available in the Owner's Information Package. However, this brief overview of mirror adjustment can begin the process: The top portion of the mirror should be adjusted horizontally so that you can see your own motorhome in the one-inch surface closest to the motorhome. The remaining portion of the mirror now permits you to see the road behind you. The mirror should be adjusted vertically so that you can see the rear bumper on the bottom of the plane portion of the mirror.

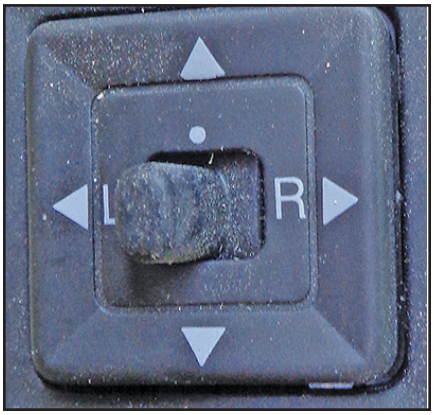


Figure 11-8:
Mirror adjustment controls

The convex mirrors should be adjusted horizontally so that you can see your own motorhome in 1/3 of the mirror. These convex mirrors should then be adjusted vertically to allow you to see any other vehicles alongside your motor home.

These mirrors also contain heating elements to defog or de-ice the mirror glass during cold weather operation. The "on/off" switch for this feature is located by the adjustment control. Further adjustment of the mirror may be necessary at the swivel portion of the mirror arm.

NOTICE

Objects viewed in convex mirrors appear smaller and farther away than they actually are.

ALLEGRO Breeze

INTERIOR FEATURES

Chapter

12

BEDSPREAD

As a furnished part of the bedroom suite, a bedspread with matching pillow accessories (Figure 12-1) is included with the Allegro Breeze motorhome.

Figure 12-1:
Bedroom decor

For the bedspread and pillow shams, cleaning instructions are "for dry-cleaning only." As the bedspread was made with materials treated for stain resistance; dry-cleaning will prolong the life of these materials. The curtains in the bedroom are color-coordinated with the bedspread and accessories to provide a pleasing décor for the bedroom area.

FLOORING

Figure 12-2:
Typical flooring in the Allegro Breeze

Vinyl flooring (Figure 12-2) is standard throughout the motorhome with the exception of the slide-out rooms. For routine cleaning, sweeping or vacuuming the floor would be sufficient. If more thorough cleaning is warranted, the flooring can be cleaned with a damp mop and water. For more stubborn stains, a mixture of soap-free household cleaner (e.g., vinegar, ammonia, or comparable products) and water can be used to advantage.

You should not unduly saturate the floor surfaces with water, as this could damage the flooring substrate. Do not use any abrasives (cleansers, scouring pads; and the like) as they can scratch or mar the vinyl flooring surfaces and may cause damage to the vinyl flooring. If ceramic tile is chosen as an option, it may be cleaned more vigorously than would be the vinyl flooring.

CEILING

Figure 12-3:
Typical ceiling in the Allegro Breeze

The ceiling (Figure 12-3) in the Allegro Breeze motorhome is covered with a padded-vinyl headliner which can be easily cleaned with a damp, soft cloth and a mild detergent.

Clean around all vent areas to prevent any build-up of dirt, grease, or other accumulations.

WINDOW TREATMENTS

Throughout the Allegro Breeze, the window treatments consist of two shades—solar and blackout (Figure 12-4).

The solar shade allows one to see out during the daytime yet blocks most of the sunlight and heat from entering the motor home. The blackout shade creates complete privacy for nighttime.

Each shade can be raised and lowered simply by pulling down on the shade.

The shades are located on all the windows in the living area and bedroom. A single shade is located in the window above the kitchen sink and the bathrooms.

Figure 12-4:
Day/night window shades

The cockpit shades operate on a manual roller tube with a retention spring.

CAUTION: DO NOT overextend the shade; this will damage the roller tube. To operate the cockpit shades, pull the shade down to the desired level and slowly release to lock the shade in place. To retract, gently pull down on the shade and release.

ALLEGRO Breeze

PLUMBING & BATH FEATURES

Chapter

13

FRESHWATER SYSTEM

MONITOR PANEL

The monitor panel (Figure 13-1) permits checking the approximate levels in the fresh, gray, and black water holding tanks; the LP-gas level; and the condition of the battery.

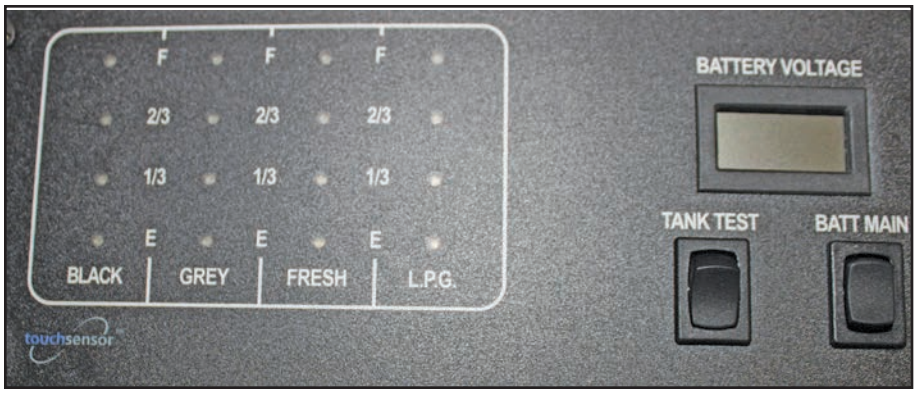


Figure 13-1: Monitor panel

The monitor panel is generally located above the refrigerator. To use this monitor, simply press the "level test" button to read the fresh, gray, and black water tanks and the present condition of the batteries.

The "empty" indicator light will momentarily light when the button is pressed. If the tank is full, all of the lights will be "on." Lights are sequentially arranged to indicate fluid levels in approximately third-tank increments. For example: if the tank selected is approximately two-thirds full, then the indicator lights "E" (for "empty"), "1/3", and "2/3" will be lit.

KITCHEN SINK

Figure 13-2:
Kitchen sink

The kitchen sink (Figure 13-2) installed is a double-bowl sink equipped with a sink cover to provide additional counter space when the sink is not in use.

For the sink, cleaning care consists of washing only with mild detergents and water and using a soft cloth for subsequent drying and polishing.

BATH SINK, SHOWER & ACCESSORIES

Figure 13-3:
Bathroom sink

The motorhome is equipped with a fiberglass shower surround. When cleaning this surface, use care to prevent scratching or marring it.

The single-handled faucet in the bathroom was chosen to match the specified decor. The bathing facilities installed may be a fiberglass shower (Figure 13-4) or combination shower/tub with a glass shower door.

Figure 13-4:
Shower

The tub faucet with showerhead, hose, and bracket are coordinated with the sink faucet.

WATER PUMP

The water pump is self-priming and totally automatic, operating on demand whenever water is required. The water pump is used to pressurize the freshwater system when the unit is not connected to city water. The switches (Figure 13-5) to this pump may be located in the bathroom, galley, or sanitation-service compartment. To start the pump, follow these instructions:

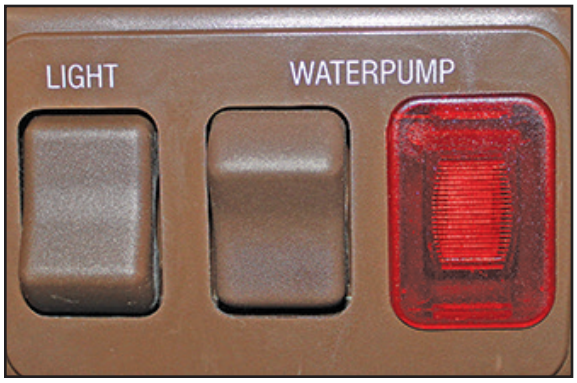


Figure 13-5:
Water pump switch

1. Fill or partially fill the fresh water supply tank.
2. Open the kitchen and bathroom faucets.
3. Turn the water pump switch "on" and allow the water to fill the water line and the hot water heater.
4. Close each faucet after it delivers a steady stream of water (close the cold-water faucet first). Leave the hot-water faucets "on" until they also deliver a steady stream of water. This procedure will assure that the water heater is filled with water.
5. The water pump should stop running once all faucets are closed.
6. The water pump is now ready for automatic operation. The pump will run when a faucet is open and stop when a faucet is closed.

7. Never allow the pump to run for long periods of time without water being present in the supply tank, as doing so may cause physical damage or blow fuses.

If water does not flow when a faucet is turned "on" while using the demand system, use the following troubleshooting chart:

SITUATION	SOLUTION
Pump running – no water	1. Fill tank 2. Clear the water line to the pump
Pump doesn't run	1. Check the pump switch 2. Check the 12-volt fuses 3. Check the electrical connections 4. Check the battery

All the water should be drained from the freshwater system when the unit is not in use for extended periods. For more detailed information regarding the water pump, one should refer to the water-pump manufacturer's brochure in your Allegro Breeze Owner's Information Package.

CITY WATER CONNECTION

When connecting your unit to city water, use the water hose manufactured and labeled for potable water service—this will assure that the hose selected for use will not alter the taste of the water (Figure 13-6).

Figure 13-6: City water supply connection

To connect the city water supply, connect one end of the hose to the city water supply.

Turn the city water supply "on" for a few seconds to clear the line. Once the hose has been flushed, turn the supply "off." Connect the other end of the hose to the city-water connections on the motorhome. Once the city water fill valve (Figure 13-7) is opened, water is supplied to the freshwater system including the hot water heater, faucets, and toilet. Turn "on" the water supply and open all of the faucets to clear any trapped air within the plumbing lines within the motor home.

Once any air pockets have purged from the water lines and water flows freely, close all of the faucets. The city water supply is pressurized; therefore, the water pump is not needed when the water system of the vehicle is connected to the city water system.

FILLING THE FRESHWATER TANK

The freshwater tank is normally filled from the city water connection. The valve located in the service compartment near the water connection determines whether the city water is going through the water system or into the freshwater tank. ince there is not an automatic shut-off when filling the freshwater tank, check the level from the monitor panel while filling the freshwater tank on the motorhome.

The excess water will be vented from an overflow in vent pipe onto the ground when the capacity of that tank has been reached. This pipe is installed in the freshwater tank to prevent possible tank rupture from inadvertent overfilling.

All of the water should be drained from the freshwater system when the motorhome is not in use for an extended period of time.

SANITIZING

To assure complete disinfecting of the freshwater system, it is recommended that the following procedures be performed on a new system, on one that has not been used for a length of time, or one that may have become contaminated. This procedure is also recommended before long periods of storage, such as during the winter months:

1. Drain the freshwater tank by opening the drain valve. All of the faucets should be in the closed or "off" position.

2. Prepare a chlorine solution using one gallon of water and one-half cup of chlorine bleach (5% sodium-hypochlorite solution). Prepare enough of the chlorine solution to administer one gallon of solution for every 15 gallons of tank capacity. For sanitizing this unit, prepare 4½ gallons of the chlorine solution. This mixture puts a 50 ppm (parts per million) residual chlorine concentration in the water system that will act as a quick-kill dosage for harmful bacteria, viruses, and slime-forming organisms. Concentrations greater than 50 ppm may damage the water lines and/or the tank.

3. Once the freshwater tank is empty, close the drain valves in the water tank.

4. Pump the chlorine solution into the tank by taking the hose attachment and attaching it to the pump and then put in the chlorine solution. Close the valve from the fresh water tank to the pump and open the valve from the solution to the pump. Turn the tank fill valve from "city water" to "tank fill." Turn "on" the water pump until all of the solution is pumped into the fresh water tank.

5. Turn "off" the water pump. Open the valve from the tank to the water pump. Fill the water tank with the city water tank fill (or by using the same method as was used to put the sanitizing solution into the tank). Remove the water filter (from the drink dispenser faucet, if installed). Open each faucet, in turn, including the kitchen faucet, bath faucet, inside and outside showers, turning "on" both the hot and cold faucets and flushing the toilet until all of the air has been purged from the pipes and the water runs freely. The entire system will then be filled with the sanitizing solution.

6. Allow the 50 ppm disinfecting solution to stand in the system at least four hours.

7. Drain the system and flush it with freshwater. The water system needs to be flushed with water repeatedly, if necessary, until there is no chlorine taste or smell left in the system. To remove any excessive chlorine taste or odor that might remain, prepare a solution of one quart of vinegar to five gallons of water. "Rock" the tank containing the solution by moving the vehicle forward and backward several times to clean the tank; then drain that tank and refill with clean water.

WATER FILTER (Optional)

This unit may be equipped with an optional water filter (Figure 13-8) which must be removed before disinfecting the fresh-water system.

Figure 13-8: Water filter

First remove the water filter and then replace cover to allow the sanitizing solution access to the faucets. As installed, the filter will remove chlorine, dirt, and other matter. The filter will also eliminate most phenol (or similar) odors and tastes while delivering sparkling, taste-free water for drinking and cooking.

The water filter is located in the sanitation compartment on the outside of the motorhome. The water filter is not guaranteed to remove the tastes and odors of iron and sulfur. To remove these impurities, you need to chlorinate the water. Replacement filters are available that will filter iron and sulfur. Ask your dealer or RV supply center about purchasing an iron and sulfur filter.

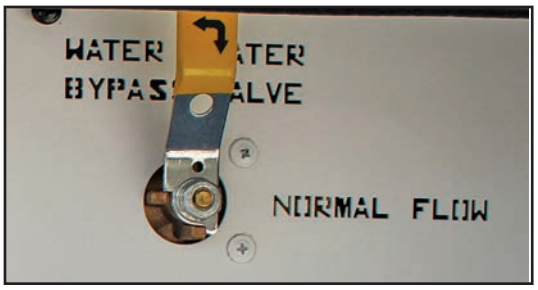
If you are traveling in an area where the water has high iron and sulfur content, then add one tablespoon of chlorine bleach to every 10 gallons of water in your tank—this will precipitate the iron or sulfur so that the filter can remove those impurities.

If you are at a site where the unit is connected to a city water supply, you will not be able to chlorinate the system because the water flows straight to your faucets and not through the freshwater tank.

Filters should be changed every 6-12 months depending on the quality and quantity of water that is used in your motorhome.

WATER HEATER BYPASS SYSTEM

The water heater bypass valve (Figure 13-9) is located in the outside utility compartment. This process is performed when winterizing your motorhome. Using the bypass valve will keep antifreeze out of the water heater when winterizing the motorhome.



Draining the water heater during winterizing is a **MUST**.

FRESHWATER LINES

Check all of the plumbing connections for leaks at least on an annual basis.

If the water pump runs when all faucets are turned "off," check for a possible leak. Be sure that the drain valves are closed. Connections at the kitchen and bathroom faucets normally seal by hand-tightening them and then making an additional half-turn with a wrench.

If a fitting leak persists, disconnect it completely and visually inspect it for mineral deposits or foreign material stuck on the sealing surfaces. Clean the surfaces thoroughly and reinstall the fitting. Take the motorhome to an authorized Tiffin Motorhomes service center for additional repairs if the water system continues to leak.

Follow the winterizing instructions given in Chapter 16 to reduce risk of leaks caused by cracks from freezing pipes. Left unchecked, freezing damage can be extensive and expensive.

WASTEWATER SYSTEM

GENERAL INFORMATION

The waste drainage system was designed to provide adequate and safe storage and/or disposal of waste materials. All of the materials used in the fabrication of this system are tested by a nationally recognized testing laboratory. The drainage system uses plastic piping and fittings connected to the sinks, toilet, and holding tanks.

This plumbing permits the drainage of these fixtures to an outside termination. The vehicle should be reasonably level for best operation of both of the wastewater systems.

There are two, separate wastewater systems. The gray-water system is for wastewater from the sinks and shower. The black-water system is for sewage waste from the toilet. Each wastewater tank has its own control valve and both drain through a common sewer-drain hose.

TOILET

The toilet (Figure 13-10) operates with water from either the fresh water tank with the water pump "on" or the city water supply. Before using the toilet, add water to the bottom of the tank. Refer to the "BLACK WATER TANK" instructions.

Figure 13-10: Toilet pedal flush lever

The toilet flushes waste directly into the black-water holding tank. It is imperative that you use as much water as possible when flushing to prevent tissue and other solids from clogging the holding tank outlet.

When using your toilet, fill the toilet ¾ full of water. To add water to the toilet bowl, push the pedal lever 1/4 of the way down until the desired water level is reached. To flush the toilet, push down on the lever until the water swirls. A small amount of water should remain in the bowl.

The toilet should be cleaned regularly for maximum sanitation and operational efficiency. Clean the toilet bowl with a mild bathroom cleaner.

NOTICE

Do not use chlorine or caustic chemicals, such as bleach or drain opening chemicals in your motorhome's toilet. This will damage the seals in the toilet and dump valves.

BLACK WATER HOLDING TANK

The "black water" (i.e., sewage) holding tank is located directly beneath the toilet. Before using the toilet, you will need to treat the tank with water that is mixed with an odor-controlling chemical. These chemicals are readily available at any RV supply store. Pull the toilet levers forward to allow the chemicals to mix with the toilet water. Continue pulling the toilet levers until a depth of at least one inch of solution is directly under the toilet. Release the levers and the waste tank is now ready for use.

GRAY WATER HOLDING TANK

The gray-water holding tank is located in the underbelly of the vehicle. It is primarily used for the drainage from the kitchen and bath sinks and the shower.

P-TRAPS

Each of the sink drains and the shower drain has a water trap (P-trap) to prevent holding-tank odors from entering the vehicle.

These traps must have water in them to trap odors. When the vehicle is in motion, the water may splash out of the sink and shower drains. When the vehicle is stored, the water may evaporate from these traps allowing odors to enter the vehicle. If this occurs, run water from the faucet into the drain, allowing water to fill the traps again.

NOTICE

Use only RV odor-controlling chemicals in the holding tanks. Products containing ammonia and petroleum will damage the ABS plastic holding tanks and seals. It is important that you use as much water as possible each time you flush the toilet. This will help prevent tissue and other solids from clogging the holding tank outlet.

WASTEWATER DISPOSAL

Both of the holding tanks terminate in a valve arrangement that permits draining each tank separately or together. It is recommended to drain the black-water tank first before draining the gray-water tank. This procedure permits the water from the gray tank to wash the black-water residue from the drain lines and hose found in the external sanitation compartment.

Figure 13-11: Sanitation coupling, valve and hose

The valves that open to release the water are called gate valves. The blade that closed the opening in the sewer drainpipes is connected to the T-handle to release contents of the tank(s) when pulled. The sewer line must be securely capped during self-containment use to prevent leakage of waste materials. Do not pull the holding tank gate valve "open" when the protective cap is installed on the pipe.

Always drain the tank into an acceptable sewer inlet or dump station. Whenever possible, drain both

the holding tanks prior to traveling. The carrying capacity of your vehicle will be reduced if water is left in the black or gray tanks. The holding tanks should only be drained when they are at least ¾ full. Doing this will provide a sufficient volume of water to allow the complete flushing of waste materials in the drain lines and hose. If the tanks are not ¾ full, add enough water to allow for sufficient flushing.

To empty the wastewater tanks, connect the adapter, supplied with your vehicle, to the drain hose (Figure 13-11). One end of the hose threads up through the hole in the bottom of the service compartment and the other end of the hose feeds into the sewer at the dump station.
Unscrew the cap from the drain. Connect the hose, with the adapter in place, to the drain fitting. Open the gate valve completely by pulling on the T-handle. The tank will start to drain as soon as the T-handle is pulled. After you have drained the black-water tank, immediately drain the gray-water tank. This procedure helps to flush the black water from the sewage hose.

When both the tanks are empty, flush them with a freshwater rinse before you close the valves. The gray tanks are easily flushed by pouring a couple of gallons of water into a sink drain. The drain outlet is engineered for quick release of the drain hose adapter. Always close the gate valves and secure the end cap to prevent leakage while the vehicle is in transit.

After draining the black-water tank, it is recommended to add a holding-tank deodorant to help control the odor and break down the solids. Follow the instructions given on the holding-tank deodorant package.

SEWER CONNECTION AND CAMPING

While using the motorhome, it is important to keep the black-waterholding-tank gate valve closed at all times, except when dumping. This allows an ample amount of liquid to remain in the tank to provide a smooth flow through the gate and drain valves when dumping.

Sufficient liquid in the tank causes a swirling action that should take any accumulated solid wastes with it. Accumulation of solid wastes in the black-water tank can be avoided by keeping the gate valve closed when connected to the sewer connection. The gray tank can be kept open while hooked to a sewer connection.

NOTE: *When dumping, it is suggested to dump the black tank first, then the gray.*

NO FUSS FLUSH

This vehicle may be equipped with a flushing system for the black-water holding tank. When draining your sewer tank, attach a water hose to the sewer spray connection. After the tank is drained, leave the gate valve "open" and open the water valve to allow water to spray inside the black-water tank. This will clean the inside of the tank of any debris that may be left inside the tank. After this procedure is done, disconnect the freshwater hose and close the gate valve.

NOTICE

Be sure the gate valve is "open" when flushing the tank. Do not use the same hose for the No Fuss Flush that is used for filling the fresh water tank.

EXTERIOR SHOWER

Your Allegro Breeze has an exterior shower (Figure 13-12) for your use and convenience outside the motorhome.

The exterior shower is located in the service compartment on the driver's side and allows you to do such things as rinse off sand or grass, muddy shoes, or bathe yourself outside of your motorhome.

The faucet operates just as it would in your kitchen or bathroom. There is also a soap dispenser and light conveniently located in the compartment.

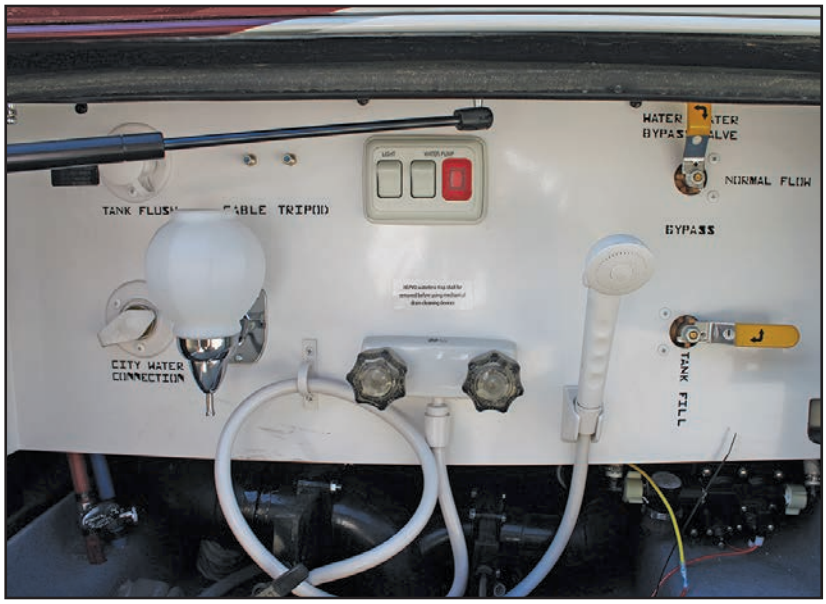


Figure 13-12: Exterior shower and shower light

ALLEGRO Breeze

WINDOWS, AWNINGS, VENTS & DOORS

Chapter

14

WINDOWS

Sliding windows are custom built for the Allegro Breeze and allow easy sliding access to open the coach to fresh outside air.

There may also be a reflective coating on the windows to reflect back a portion of the sunlight to reduce the heating of the motorhome interior and to reduce the effects of the sun's "bleaching" of interior fabrics (curtains, upholstery).

Sun shades on both the driver's and passenger's sides can be deployed and moved at any time.

Windows throughout the coach are designated as "EXIT" windows in the event of an emergency.

Figure 14-1: Allegro Breeze windows

AWNING

Figure 14-2: Power patio awning

The power patio awning (Figure 14-2) is standard on the Allegro Breeze.

Use the following directions to operate the awning properly:

Extending the Awning
(Using the Rocker Switch)

1. Press and hold the "Extend" button and the awning will automatically open.

Retracting the Awning
(Using the Rocker Switch)

2. Press and hold the "Retract" button for three seconds and the awning will automatically close.

For additional operating and maintenance instructions, please refer to the Awning Owner's Manual found in the Owner's Information Package.

WARNING

Since damage resulting from weather is not under warranty, anytime a heavy or prolonged rain or blustery winds are anticipated, it would be advisable to close the awning. Similarly, if the awning is to be left unattended for any prolonged length of time, you should close that awning.

VENTS

Figure 14-3: Overhead vent fan

The kitchen and bathroom are both equipped with a 12-VDC exhaust vent fan (Figure 14-3). A three-speed switch controls the fan speed of both.

The vent fan should only be left in the "on" mode when the motorhome is parked and in use. The fan will not operate until the vent is open.

DOORS

The primary entrance door to the motorhome has a key lock and a dead bolt for additional security. When the door is fully opened, the door hinge automatically holds the door in an "open" position

There is also a screen that allows increased air circulation when the entrance door is open.

WARNING

Always secure the dead bolt lock while the motor home is in motion to prevent accidental opening of the entrance door.

ALLEGRO Breeze

DRIVING YOUR MOTORHOME

Chapter

15

TRIPLE VISION CAMERA MONITOR SYSTEM

Figure 15-1:
Rear-view camera monitor system

The rear-view monitoring system (Figure 15-1) is provided to aid the driver in backing and parking the motorhome.

A camera mounted on the rear of the vehicle feeds a televised view of the rear of the motorhome to the monitor located in the front near the driver. If the mode switch is in the "manual" mode, the monitor will be "on" when the ignition switch is turned "on."

If the mode switch is in the "automatic" mode, the monitor will display the picture from the rear-mounted camera only when the transmission is in "reverse" gear. To use this system effectively, please consult the owner's manual for this system. This manual is in the Owner's Information Package.

Basic Rear View Camera Operation:

1. Depress the POWER switch. The picture appears on the monitor. POWER indicator lights up green. To turn off the picture, press it again to release. The monitor moves to standby condition. POWER indicator lights up red.
2. Adjust the VOLUME control.
3. Adjust the picture contrast and brightness. The DAY/NIGHT selector switch should normally be kept in the DAY (released) position. When you view the picture at night or in a tunnel, etc., depress t he switch to make the picture less bright (therefore in the NIGHT position). Thus, the picture will be easy to view even in a dark place.

When you set the gear level to the "R" position with the POWER switch released: The monitor is turned on and the picture from the camera connected to the CAMERA "A" connector appears irrespective of the INPUT knob setting.

SIDE-MOUNT CAMERA

As an enhanced aid to driving, the Allegro Breeze features side-mounted cameras on both sides of the motorhome.

These side-mounted cameras are activated whenever the motor home in transit begins to make a turn. When the "left" turn indicator is used, the left-side camera is activated and that camera displays on the back-up monitor a rearward-oriented view of the driver's side showing that side of the motorhome and a limited panorama of what is alongside and immediately behind the motorhome as it begins to turn into that direction.

In this manner, the typical "blind spot" of most motorhomes is drastically reduced or eliminated so that the driver can make those turns with great confidence. Similarly, the "right" turn indicator operates in

the same manner to show a rearward view of the right side of the motorhome when a right hand turn is made.

Figure 15-2:
Side-mount camera monitor

CB RADIO SYSTEM ANTENNA CONNECTION

As an option, the Allegro Breeze may come equipped with an antenna and coaxial-cable connection to enable the owner to install a Citizens Band (CB) radio of choice and operate it conveniently from the Allegro Breeze.

The coaxial-cable connection for the radio is found beneath the dashboard on the driver's side. Accordingly, with an owner-provided CB radio, that radio can be used to communicate with other travelers on the road.

To use the one's CB system of choice, simply follow the directions furnished with the CB radio.

Note: Channel 11 is considered an emergency channel and monitoring this channel may give one information about road conditions, accidents, and related matters potentially affecting the travels of the motorhome operator.

AM / FM / CD STEREO SYSTEM

An AM/FM/CD stereo system is included in the motorhome.

This system is powered by the 12-volt DC system of the motorhome and operates like any conventional car-stereo system. The coach is also SIRIUS XM compatible with a subscription.

Figure 15-3:
CD player

DASHBOARD HEATING/COOLING CONTROLS

The dash air conditioner/heater is not designed to heat and cool the entire interior of the motorhome. It is intended only to provide heating and cooling for the cab area.

A small amount of air will blow out of all of the defrost and dash vents regardless of the mode settings.

Figure 15-4: Dashboard controls

TELESCOPING & TILT STEERING

Figure 15-5: Steering column

Figure 15-6: Steering column handle

The Allegro Breeze is equipped with a telescping and tilt steering column that allows you to easily adjust the steering system for your use traveling and while it is parked. Push the handle to move the column into a completely upright telescoping position and pull the handle to tilt the steering wheel in the desired position.

AUTOMATIC LEVELING SYSTEM

The Allegro Breeze is equipped with a HWH computer-controlled single step air leveling system.

Maintain adequate clearance in all directions for vehicles, room extensions, doors, steps, etc. The "DUMP" and "RAISE" buttons will function with the park brake on or off, if the ignition is in the "ON" or "ACC" position.
NOTE: If the park brake is not set, automatic leveling, manual leveling and room extensions will not work.

To operate the manual air leveling mode:

1. Place the transmission in park. The manual raise and lower buttons can only be used if the ignition is in the "ON" or "ACC" position. Running the vehicle engine during leveling is recommended as it will provide better air supply. The vehicle will level with the engine shut off, but more time will be required.
2. Press the "AIR" button once to start the automatic leveling sequence. The LEVELING SYSTEM ACTIVE LIGHT will flash. The four red WARNING lights on the panel will come on.
3. When all four yellow level lights are out, the LEVELING SYSTEM ACTIVE LIGHT will stop

flashing and start pulsating dimly. The leveling system is now in sleep mode and the ignition can be turned off.

4. The SLEEP MODE will continue until the CANCEL button or the TRAVEL MODE buttons are pushed or until the park brake is released.

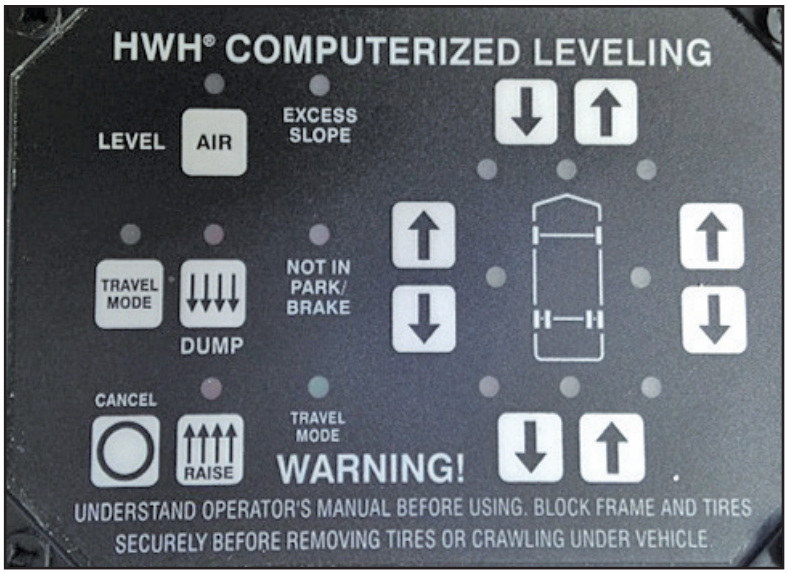


Figure 15-7: Leveling system control panel

To operate the manual air leveling mode:

1. Place the transmission in park. The manual raise and lower buttons can only be used if the ignition is in the "ON" or "ACC" position. Running the vehicle engine during leveling is recommended as it will provide better air supply. The vehicle will level with the engine shut off, but more time will be required.

2. The vehicle can be leveled using the RAISE and LOWER buttons on the right half of the panel in conjunction with the yellow LEVEL indicator lights. The yellow LEVEL indicator lights signal that side or end of the motorhome is low. When all yellow lights are out, the vehicle is level. Try leveling the vehicle by lowering the high side or end.

3. Turn the ignition to the "OFF" position.

4. Turn the system off.

To operate the "DUMP" and "RAISE" functions:

The ignition must be in the "ON" or "ACC" position to use the DUMP or RAISE buttons. Leave the engine running if the RAISE funtion is to be used. The park brake **DOES NOT** have to be set to use the DUMP or RAISE buttons.

To stop a DUMP or RAISE function when the park brake is set:

A. Push the CANCEL button or turn the ignition off.

B. Push the TRAVEL MODE button.

To stop a DUMP or RAISE function when the park brake is NOT set:

A. If the vehicle is moving and the speed exceeds 10 MPH, the system will return to the TRAVEL MODE.

B. Push the TRAVEL MODE button or the CANCEL button.

C. Turn the ignition off. The vehicle will stop raising or lowering and stay in that position. **DO NOT TURN THE IGNITION OFF IF THE VEHICLE IS MOVING.**

For a more complete review of the leveling system, find the operation guide inside your Owner's Information Packet.

ALLEGRO Breeze

ROUTINE MAINTENANCE

Chapter

16

NOTICE

Damage caused by improperly performed maintenance or inadequate maintenance is not covered by your Tiffin Motorhomes limited warranty.

WASHING

The paint on your Tiffin motorhome has a polyurethane base called Diamont. While multiple layers of clear coat sealants protect the paint against oxidation, the sealant must be protected from deterioration.

Figure 16-1: Typical motor home exterior

Paint manufacturers advise against using harsh cleaners such as Simple Green, Mr. Clean, or liquid dish washing soaps. The degreasing agents in these cleaners leave a residue on the sealant, which soften and damage the clear coat in time.

Baby shampoo provides an effective yet gentle cleaner. Without the typical heavy degreasers of most detergents, baby shampoo cleans without leaving a residue to gum up the clear coat finish. Generally one ounce (1 oz.) is all you need per five gallon bucket of water. Add one cup of food grade distilled white vinegar to your wash bucket.

Tiffin Motorhomes recommends the lambswool pad sold by Mary Moppins. This allows you to safely wash your coach from the ground by placing the pad on an extension.

Do not mistake lambswool with imitations. Imitation pads are made from 100% polyester, which is plastic. Plastic imitations will scratch the finish of the motorhome. For this same reason avoid microfiber products to wash or dry your motorhome, car, boat, airplane, motorcycle, vehicle, furniture, or cabinets. Microfiber is made from 80% polyester.

Avoid washing with brushes. Even though you may not see brush marks now, the damage will happen as the bristles wear down.

Use only 100% cotton towels to dry your vehicle. Adding vinegar to your wash water and washing in the morning or evening will help prevent water spots. Water spots damage the exterior of your coach the same way they damage glass shower doors. They etch their way into the surface and removal becomes difficult. Prevention becomes the key.

Wash one side at a time, rinse, and then dry quickly using a squeegee followed by a towel placed over the cleaning head.

To remove oil and grease remember an important rule of cleaning: Give your product time to work. Dab a bit of concentrated cleaner like CleanEz by Mary Moppins—never an orange based cleaner or one with petroleum distillates—onto a soft cloth. Apply to the oil spot and wait 10 to 15 minutes before rubbing lightly to remove the oil. Rinse immediately.

SEALS

The seals around the doors, windows, vents, slide-out trim, and external seams should be checked at least semi-annually. Additionally, the roof seams should be inspected for cracking or peeling semi-annually. If deterioration is noted during a routine maintenance inspection, reseal the seams or seals with an approved sealant to prevent leaks.

Your Tiffin Motorhomes dealer can perform resealing inspections and subsequent work for you. It is recommended that a Tiffin Motorhomes authorized service center perform these inspections periodically and perform necessary resealing when necessary.

PROPER SEALANTS FOR APPLICATION

The following sealants are recommended for specific sealing applications, as noted in the table. These can be purchased through the Tiffin Motorhomes parts and service department by calling 256-356-0261.

Recommended sealants for specific sealing applications

SEALANT	APPLICATION
Plas-T-Code	Metal or fiberglass roof
Surebond #SB-140	Rubber laminated to metal roof and ALL SKYLIGHTS
Carlisle #502-LSW self leveling sealant	Rubber roof over wood base
Silicone sealant	To cover butyl and other sealants; not to be used as the main sealant
Parbond	To seal across tops of windows on exterior surfaces where silicone is not used

NOTICE

Do not use solvents such as acetone, MEK, toluene, and the like on the decals. Any solvent including alcohol may soften and smear colors. Do not use lacquer thinner or paint thinner on decals. Do not overcoat the decals with clear paint. Do not allow gasoline or other fuels to come into prolonged contact with the decals. However, if this should occur, immediately flush the affected area with water.

WHEEL CARE

The care and maintenance of your wheels are simple and require no special material or products; simply follow the directions included in the Owner's Information Package for these. Timely care and cleaning will maintain the appearance of these wheel products for many years.

CAUTION

Do not use harsh detergents, acids, or abrasives which may scratch or dull the surfaces. The applicator cloth, sponge, or soft-bristled brush should be nonmetallic and non-abrasive. Also, remember to check the tightness of the wheel lug nuts frequently.

ROOF CARE & MAINTENANCE

Proper care and maintenance of your motorhome, including your roof (Figure 16-2), is important for sustained, trouble-free performance. Normal maintenance is simple and easy and does not require special materials.

The roof of the motorhome is fiberglass and can be cared for in theconventional manner. Clean the roof at least every three months. The roof should be professionally inspected by a dealer annually.

WARNING

Use caution when working on the top of your motorhome. The wet roof may be extremely slippery and, as such, a possible safety hazard.

MOISTURE MANAGEMENT

This section outlines important recommendations to manage moisture in your motorhome to avoid moisture-related damage, such as mold. The materials and methods used to construct your motorhome were selected in part to minimize air leakage and to create a weather tight exterior shell. However, in order to protect your investment and reduce the risk of moisture-related damage and costly repairs, attention and care has to be taken to manage moisture inside your RV.

Note: These are only suggestions intended to minimize moisture-related issues with your motorhome. If any concerns arise, contact Tiffin Motorhomes' Service Department at (256) 356-0261.

Interior Care of your RV

Signs of excessive moisture can be obvious, such as water droplets forming on surfaces or wet carpet. Conversely, signs of excess moisture can be subtle, such as condensation forming on metal surfaces. When symptoms appear, it is important to immediately determine the cause of the excess moisture and take appropriate corrective action to prevent moisture related damage.

Control relative humidity

Monitoring and controlling relative humidity within the motorhome is one of the most important steps to minimize the risk for moisture-related damage. Ideally, relative humidity should be at 60% or less. Relative humidity can be monitored utilizing a portable hygrometer, which is a small device that measures temperature and relative humidity.

Use exhaust fans, the air conditioner, and/or a portable dehumidifier to manage moisture inside the RV to maintain relative humidity at 60% or less. In cold climates, relative humidity may need to be at 35% or less to avoid window condensation issues. If the motorhome is used the majority of the time in a hot, humid climate, it may be difficult to keep relative humidity below 60%. A dehumidifier will help, but is important to check the condensation (water) collection bucket regularly or discharge the condensation (water) directly to a drain.

Avoid drastic thermostat setbacks

To minimize the opportunity for condensation to form on interior surfaces, maintain a comfortable temperature in your RV, and avoid nighttime setbacks of 10 degrees or more. Drastic setbacks that reduce the indoor air temperature quickly can increase the chance for airborne moisture to condense on cool surfaces such as windows. If you are away from your RV for an extended number of days, it is recommended that you do not set the temperature back without taking other measures to manage relative humidity, including operating a dehumidifier with a continuous drain.

Manage Window Condensation

Window condensation issues can be identified by water or ice-build up, usually at the base of the window. The majority of these problems can be addressed by managing moisture generated inside the motorhome. Minor condensation issues are not unusual, especially for RVs used in colder climates. To help minimize window condensation, use exhaust fans vented to the outside, avoid drastic changes in thermostat settings, do not use "vent-free" heaters and use window coverings wisely. For example, make sure to open curtains or blinds during the day to allow air to circulate and warm the window surface.

Carpet Care and Moisture Management

The carpet should be cleaned when it shows signs of discoloration or traffic patterns. A steam cleaning system should be used to clean the carpet unless other noted in your warranty information. To manage moisture from the cleaning process, the cleaning system needs to be capable of extracting the excess water from the carpet after it has been cleaned.
Important: Be sure the carpet is thoroughly dry before closing up the RV for storage. Water from the cleaning process can cause significant damage to the RV if the carpet is not completely dry before closing up the motorhome for an extended period.

Cleaning Tile and Wood Floors

Most floors only require a mild detergent and warm water for cleaning. More water on the floor is not always better for cleaning. Use a damp cloth to clean on a regular basis rather than wet mopping each time.

Storage and Other Isolated Areas within the RV

Storage areas are more difficult to condition since the areas are isolated from the main body of the RV. The surfaces of these areas are more at risk for condensation and surface mold growth. To minimize this risk, clean storage areas regularly, and allow an air space between stored items and the exterior wall to promote air circulation.

Use of Un-Vented Combustion Equipment

Un-vented combustion equipment, such as propane stovetops are a source of moisture within the RV. For every gallon of fuel consumed, approximately one gallon of water vapor is evaporated into the air. Whenever possible, operate an exhaust fan in combination with the use of any un-vented combustion appliance within the RV. Water vapor and other combustion byproducts should be vented to the exterior of the RV. The RV owner should strictly follow use and maintenance instructions for safe operation of any combustion equipment, particularly un-vented equipment.

Exterior Care of Your RV

The exterior shell of the RV is the primary weather and moisture barrier. Over the life of the vehicle,

the shell will require regular care and maintenance in accordance with other instructions for exterior care. The shell includes the roof, sidewalls, windows, doors, and under-floor of the vehicle. Particular attention needs to be devoted to ensure these components are maintained to ensure a tight barrier against bulk water intrusion. The shell should be inspected periodically for tears, gaps, and condition of sealants in accordance with this owner's manual. Areas that require maintenance should be resealed utilizing a similar, high quality sealant used by the manufacturer. Particular attention should be devoted to ensure the slide outs are functioning properly. Each time a slide out is used it should be inspected to ensure proper operation and sealing. The slide out gaskets should also be inspected to ensure proper sealing when the slide out is operated.

Use of Your RV

It is important to remember that the square footage of an RV is significantly less than that of a single family residence. This fact alone will elevate the relative humidity because there is less volume of air to help absorb or dissipate the humidity. For example, showering and cooking create a lot of humidity in a small area. In these instances, use of an exhaust fan and opening windows should reduce the relative humidity, particularly when living in the RV for an extended period.

Severe Environments

Prolonged use of your RV in severe environments—for example in extremely cold or hot-humid climates, will require extra care and maintenance to avoid moisture-related issues. In both extremely cold and hot humid climates more attention needs to be focused on controlling relative humidity within the RV. It also may require the use of a portable dehumidifier to manage relativity humidity within an acceptable range.

Storage of Your RV

During those periods when your motorhome is not in use, care must be taken to ensure moisture sources are addressed. Ideal storage of your RV would be in an enclosed climate controlled environment. When this is not possible, the following steps should be taken to ensure moisture is controlled:

- Turn off all water sources
- Turn off all combustion appliances
- Drain the water tank(s)
- Drain the water heater
- Open all closets, cabinet doors and drawers
- Close all windows and entrance doors
- Open a vent or a window enough to allow for some limited ventilation air flow, but not so far as to allow snow or rain to enter
- When storing the RV in high humidity climates, add a dehumidifier drained to exterior to control humidity inside the RV during storage
- Refer to other sections of this owner's manual for additional recommendations

Modifications to your RV

Consult Tiffin Motorhomes for guidance prior to making any modifications to your RV. It is important that changes be completed by a qualified service firm to ensure moisture intrusion or accumulation problems do not occur.

Wet Areas

Areas that are exposed to water spills or leaks should be dried as soon as possible and definitely within 24 to 48 hours. Drying areas quickly minimizes the chance for moisture damage and possible mold growth, which can begin to form colonies within 48 hours. A variety of methods can be used to help the drying process:

- Remove excess water with an extraction vacuum
- Use a dehumidifier to aid drying
- Use portable fans to move air across the surface
- Because moisture is key to mold issues, treat all signs of condensation and spills seriously and deal with promptly. Failure to deal with a moisture issue promptly may cause more severe issues where none initially existed, or may make a small problem much worse.
- Learn to recognize signs of mold—don't paint over or cover up suspicious discoloration until you are sure it is not mold. The affected surface must first be cleaned and dried; residual staining may be painted.
- Be sure to understand and eliminate the source of moisture accumulation as a part of the cleanup. Otherwise, the same issues will simply reoccur.
- Small amounts of mold should be cleaned as soon as it appears. Small areas of mold should be cleaned using a detergent/soapy solution or an appropriate RV household cleaner. Gloves should be worn during cleaning. The cleaned area should then be thoroughly dried. Dispose of any sponges or rags used to clean mold.

TIRE & SAFETY INFORMATION

This portion of the Owner's Manual contains tire safety information as required by 49 CFR 575.6. The National Traffic Safety Administration (NHTSA) can be contacted at 1-888-327-4236. Their web site is http://www.safecar.gov and their address is: NHTSA, 400 Seventh St, S.W., Washington, D.C. 20590.

Section One:

The National Traffic Safety (NHTSA) has published a brochure (DOT HS 809 361) that discusses all aspects of Tire Safety, as required by CFR 575.6. This brochure is reproduced in part below. It can be obtained and downloaded from NHTSA, free of charge, from the following web site: http://www.nhtsa.dot.gov/cars/rules/TireSafety/ridesonit/tires index.html

Studies of tire safety show that maintaining proper tire pressure, observing tire and vehicle load limits, avoiding road hazards, and inspecting tires for cuts, slashes, and other irregularities are the most important things you can do to avoid tire failure, such as tread separation or blowout and flat tires.

These actions, along with other care and maintenance activities, can also:

- Improve vehicle handling
- Help protect you and others from avoidable breakdowns and accidents
- Improve fuel economy
- Increase the life of your tires

This section presents a comprehensive overview of tire safety, including information on the following topics:

- Basic tire maintenance
- Uniform Tire Quality Grading System
- Fundamental characteristics of tires
- Tire safety tips

Use this information to make tire safety a regular part of your vehicle maintenance routine. Recognize that the time you spend is minimal compared with the inconvenience and safety consequences of a flat tire or other tire failure.

Safety First-Basic Tire Maintenance

Properly maintained tires improve the steering, stopping, traction, and load-carrying capability of your vehicle. Under-inflated tires and overloaded vehicles are a major cause of tire failure. Therefore, as mentioned above, to avoid flat tires and other types of tire failure, you should maintain proper tire pressure, observe tire and vehicle load limits, avoid road hazards, and regularly inspect your tires.

Finding Your Vehicle's Recommended Tire Pressure and Load Limits

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Vehicle capacity weight (VCW—the maximum occupant and cargo weight a vehicle is designed to carry)
- Front and rear gross axle weight ratings (GAWR—the maximum weight the axle systems are designed to carry)

For motor homes: Both placards and certification labels are on a sticker that is located in the rear closet.

Understanding Tire Pressure and Load Limits

Tire inflation pressure is the level of air in the tire that provides it with load-carrying capacity and affects the overall performance of the vehicle. The tire inflation pressure is a number that indicates the amount of air pressure—measured in pounds per square inch (psi)—a tire requires to be properly

inflated. (You will also find this number on the vehicle information placard expressed in kilopascals (kPa), which is the metric measure used internationally).

Vehicle manufacturers determine this number based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the "recommended cold inflation pressure."
Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the "maximum permissible inflation pressure" on the tire sidewall. This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

Checking Tire Pressure

It is important to check your vehicle's tire pressure at least once a month for the following reasons:

- Most tires may naturally lose air over time
- Tires can lose air suddenly if you drive over a pothole or other object or if you strike the curb when parking
- With radial tires, it is usually not possible to determine under-inflation by visual inspection

For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets.

The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

Steps for Maintaining Proper Tire Pressure

- Step 1: Locate the recommended tire pressure on the vehicle's tire information placard, certification label, or in the owner's manual
- Step 2: Record the tire pressure of all tires
- Step 3: If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure
- Step 4: If the tire pressure is too low, note the difference between the measured tire pressure and correct tire pressure. These "missing" pounds of pressure are what you will need to add
- Step 5: At a service station, add the missing pounds of air pressure to each tire that is under-inflated
- Step 6: Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure)

If you have been driving your vehicle and think that a tire is under-inflated, fill it to the recommended cold inflation pressure indicated on your vehicle's tire information placard of certification label. While

your tire may still be slightly under-inflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is slightly lower than the vehicle manufacturer's recommended cold inflation pressure than to drive with a significantly under-inflated tire. Since this is a temporary fix, don't forget to recheck and adjust the tire's pressure when you can obtain a cold reading.

Tire Size

To maintain tire safety, purchase new tires that are the same size as the vehicle's original tires or another size recommended by the manufacturer. Look at the tire information placard, the owner's manual, or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult with the tire dealer.

Tire Tread

The tire tread provides the gripping action and traction that prevent your vehicle from slipping or sliding, especially when the road is wet or icy. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built-in tread-wear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear "even" with the outside of the tread, it is time to replace your tires.
Another method for checking tread depth is to place a penny in the tread with Lincoln's head upside down and facing you. If you can see the top of Lincoln's head, you are ready for new tires.

Tire Balance and Wheel Alignment

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counterbalance heavy spots on the wheel-and-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle's frame. This adjustment maximizes the life of your tires. These adjustments require special equipment and should be performed by a qualified technician.

Tire Rotation

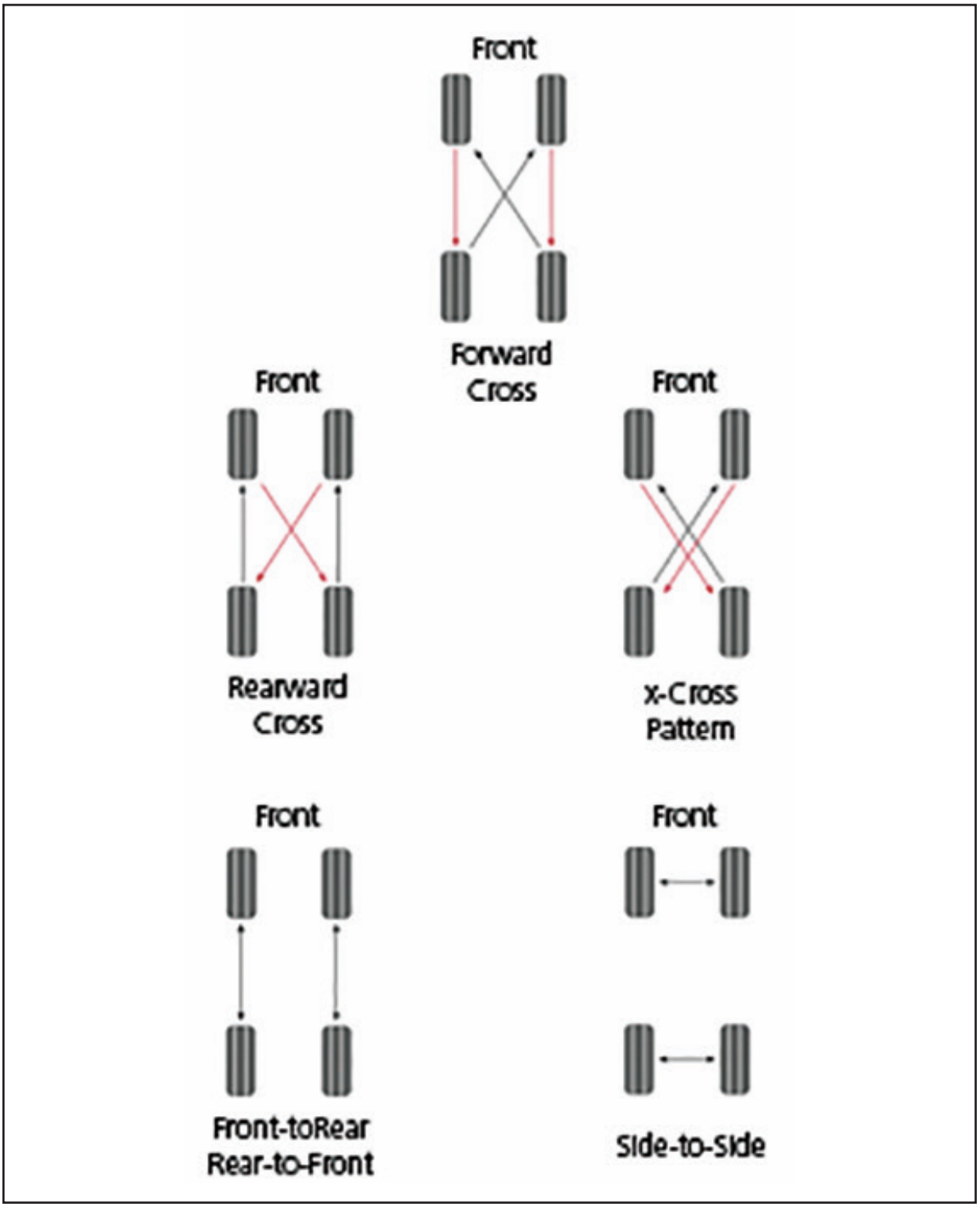
Rotating tires from front to back and from side to side can reduce irregular wear (for vehicles that have tires that are all the same size). Look in your owner's manual for information on how frequently the tires on your vehicle should be rotated and the best pattern for rotation.

Tire Repair

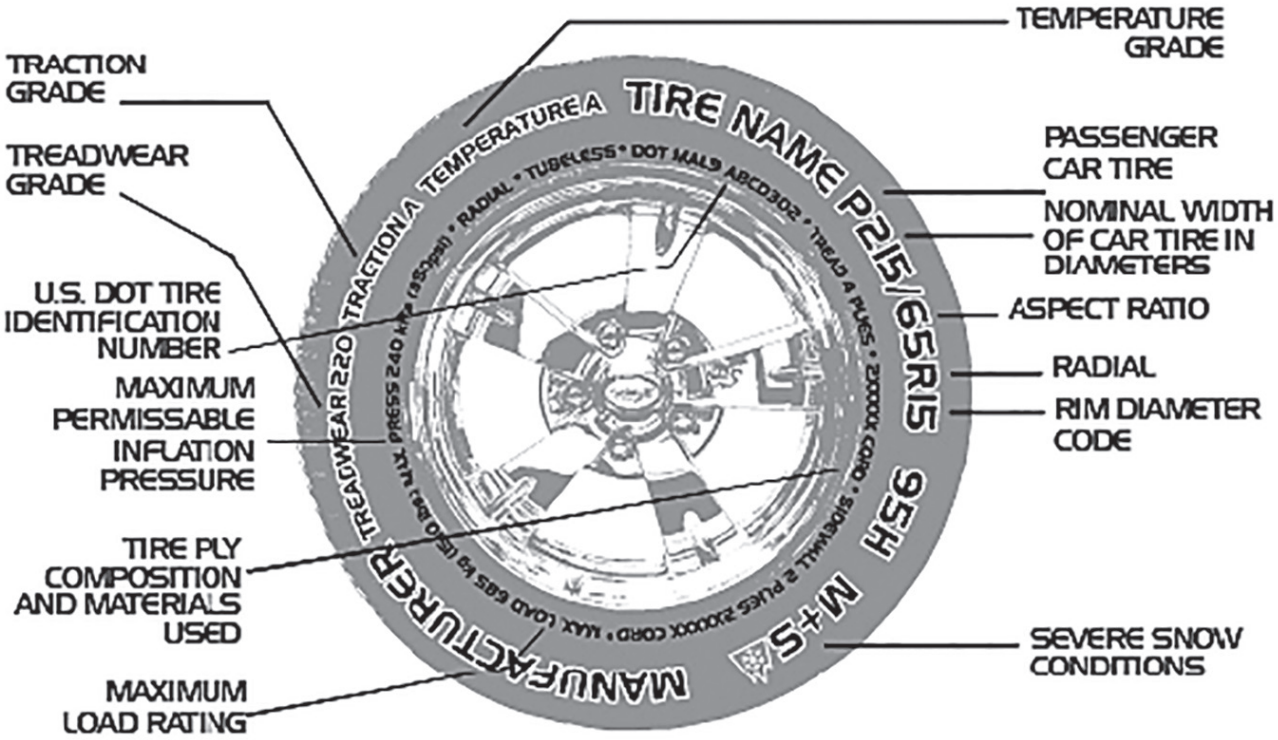
The proper repair of a punctured tire requires a plug for the hole and a patch for the area inside the tire surrounds the puncture hole. Punctures through the tread can be repaired if they are not too large, but punctures to the sidewall should not be repaired. Tires must be removed from the rim to be properly inspected before being plugged and patched.

A Tire Rotation Example

For maximum mileage, rotate your tires every 5,000 miles. Follow correct rotation patterns.



Information on Passenger Vehicle Tires



P—The "P" indicates the tire is for passenger vehicles. **NOTE:** Passenger car tires are not recommended for use on trailers, because the capacity ratings are not marked on the side walls of these tires. In the event a passenger car tire is used, the capacity must be de-rated by 10%.

Next number—This three-digit number gives the width in millimeters of the tire from sidewall edge to sidewall edge. In general, the larger the number, the wider the tire.

Next number—This two-digit number, known as the aspect ratio, gives the tire's ratio of height to width. Numbers of 70 or lower indicate a short sidewall for improved steering response and better overall handling on dry pavement.

R—The "R" stands for radial. Radial ply construction of tires has been the industry standard for more than 20 years.

Next number—This two-digit number is the wheel or rim diameter in inches. If you change your wheel size, you will have to purchase new tires to match the new wheel number.

Next number—This two- or three-digit number is the tire's load index. It is a measurement of how much weight each tire can support. You may find this information in your owner's manual. If not, contact a local tire dealer.
NOTE: You may not find this information on all tires because it is not required by law.

M+S—The "M+S" or "M/S" indicates that the tire has some mud and snow capability. Most radial tires have these markings.

Speed Rating—The speed rating denotes the speed at which a tire is designed to be driven for extended periods of time.

U.S. DOT Tire Identification Number—This begins with the letters "DOT" and indicated that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, and the last four numbers represent the week and year the tire was built. For example, the numbers 1612 means the 16th week of 2012. The other numbers are marketing codes used at the manufacturer's discretion. This information is used to contact customers if a tire defect requires a recall.

Tire Ply Composition and Materials Used—The number of plies indicates the number of layers of rubber-coated fabric in the tire. In general, the greater the number of plies, the more weight a tire can support. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

Maximum Load Rating—This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

Maximum Permissible Inflation Pressure—This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

Vehicle Load Limits

Determining the load limits of a vehicle includes more than understanding the load limits of the tires alone. On a motorhome, there is a federal certification label that is affixed in the rear closet. The certification label will indicate the vehicle's gross vehicle weight rating (GVWR). This is the most weight the fully loaded vehicle can weigh. It will also provide the gross axle weight rating (GAWR).

This is the most a particular axle can weigh. If there are multiple axles, the GAWR of each axle will be provided. For motorhomes, in the same location as the certification label described above, there is a vehicle placard in the entry door frame. This placard provides tire and loading information. In addition, this placard will show the vehicle's seating capacity for people and a statement regarding maximum cargo capacity.

Cargo Capacities

For motorhomes, cargo can be added to the vehicle, up to the maximum weight specified on the placard. For motorized vehicles, the combined weight of passengers and cargo is provided as a single number. If fewer people are traveling, more cargo can be added. If more people are involved, the weight of cargo must be reduced. In any case, remember: the total weight of a fully loaded vehicle, including passengers, can not exceed the stated GVWR.

For motorhomes, the water and propane also need to be considered. The weight of fully filled propane containers is considered part of the weight of the RV before it is loaded with people or cargo and is not considered part of the disposable cargo load. Water, however, is a cargo weight and is treated as such. If there If there is a fresh water storage tank of 50 gallons, this tank when filled would weigh about 400 pounds. If more cargo or people are being transported, water can be off-loaded to keep the total amount of cargo added to the vehicle within the limits of the GVWR so as not to overload the vehicle.

Understanding this flexibility will allow you to make choices that fit your travel and camping needs. When loading your cargo, be sure it is distributed evenly to prevent overloading front to back and side to side. Heavy items should be placed low and as close to the axle positions as reasonable. Too many items on one side may overload a tire.

The best way to know the actual weight of the vehicle is to weigh it at a certified public scale. Talk to your RV dealer to discuss the weighing methods needed to determine the various weights related to the RV. This would include weights for the following: axles, wheels, hitch and total weight.

How Overloading Affects Your RV and Tires

The results of overloading can have serious consequences for passenger safety. Too much weight on your vehicle's suspension system can cause spring, shock absorber, or brake failure, handling or steering problems, irregular tire wear, tire failure or other damage.

An overloaded vehicle is hard to drive and hard to stop. In cases of serious overloading, brakes can fail completely, particularly on steep hills. The load a tire will safely carry is a combination of the size of tire, its load range, and corresponding inflation pressure.

Excessive loads and/or under-inflation cause tire overloading and, as a result, abnormal tire flexing occurs. This situation can generate an excessive amount of heat within the tire. Excessive heat may lead to tire wear and eventually tire failure.

It is the air pressure that enables a tire to support the load, so proper inflation is critical. Since RVs can be configured and loaded in many ways, air pressures must be determined from actual loads (determined by weighing) and taken from the load and inflation tables provided by the tire manufacturer. These air pressures may differ from those found on the certification label. However, they should never exceed the tire limitation for load or air pressure.

Tire Safety Tips

Preventing Tire Damage

- Slow down if you have to go over a pothole or other object in the road.
- Do not run over curbs or other foreign objects in the roadway, and try not to strike the curb

when parking.

Tire Safety Checklist

- Check tire pressure regularly (at least once a month), including the spare.
- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma.
- Remove bits of glass and foreign objects wedged in the tread.
- Make sure your tire valves have valve caps.
- Check tire pressure before going on a long trip.
- Do not overload your vehicle. Check the Tire Information and Loading Placard or User's Manual for the maximum recommended load for the vehicle.

Section Two:

Steps for Determining Correct Load Limit

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX lbs" on your vehicles placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kilograms or XXX pounds.
4. The resulting figure equals the available amount of cargo and luggage capacity. For example, if the "XXX" equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage capacity is 650 lbs. (1400-750 (5 x 150) = 650 lbs.)
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage capacity calculated in Step #4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this section to determine how this reduces the available cargo and luggage capacity of your vehicle.

Section Three:

Glossary of Tire Terminology

Accessory weight—The combined weight (in excess of those standard items which may be replaced) of automatic transmission, power steering, power brakes, power windows, power seats, radio and heater, to the extent that these items are available as factory-installed equipment (whether installed or not).

Bead—The part of the tire that is made of steel wires, wrapped or reinforced by ply cords and that is

shaped to fit the rim.

Bead separation—This is the breakdown of the bond between components in the bead.

Bias ply tire—A pneumatic tire in which the ply cords that extend to the beads are laid at alternate angles substantially less than 90 degrees to the centerline of the tread.

Carcass—The tire structure, except tread and sidewall rubber which, when inflated, bears the load.

Chunking—The breaking away of pieces of the tread or sidewall.

Cold inflation pressure—The pressure in the tire before you drive.

Cord—The strands forming the plies in the tire.

Cord separation—The parting of cords from adjacent rubber compounds.

Cracking—Any parting within the tread, sidewall, or inner liner of the tire extending to cord material.

CT—A pneumatic tire with an inverted flange tire and rim system in which the rim is designed with rim flanges pointed radially inward and the tire is designed to fit on the underside of the rim in a manner that encloses the rim flanges inside the air cavity of the tire.

Curb weight—The weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, and coolant, and, if so equipped, air conditioning and additional weight optional engine.

Extra load tire—A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Groove—The space between two adjacent tread ribs.

Gross Vehicle Weight Rating (GVWR)—The maximum permissible weight of this fully loaded motorhome.

Gross Axle Weight Rating (GAWR)—The value specified as the load carrying capacity of a single axle system, as measured at the tire-ground interfaces.

Hitch Weight—The vertical trailer load supported by the hitch ball.

Innerliner separation—The parting of the innerliner from cord material in the carcass.

Intended outboard sidewall—The sidewall that contains a white-wall, bears white lettering or bears

manufacturer, brand, and /or model name molding that is higher or deeper than the same molding on the other sidewall of the tire or the outward facing sidewall of an asymmetrical tire that has a particular side that must always face outward when mounted on a vehicle.

Light truck (LT) tire—A tire designated by its manufacturer as primarily intended for use on lightweight trucks or multipurpose passenger vehicles.

Load rating—The maximum load that a tire is rated to carry for a given inflation pressure.
Maximum load rating—The load rating for a tire at the maximum permissible inflation pressure for that tire.

Maximum permissible inflation pressure—The maximum cold inflation pressure to which a tire may be inflated.

Maximum loaded vehicle weight—The sum of curb weight, accessory weight, vehicle capacity weight, and production options weight.

Measuring rim—The rim on which a tire is fitted for physical dimension requirements.

Non-pneumatic rim—A mechanical device which, when a non-pneumatic tire assembly incorporates a wheel, supports the tire, and attaches, either integrally or separably, to the wheel center member and upon which the tire is attached.

Non-pneumatic tire assembly—A non-pneumatic tire, alone or in combination with a wheel or wheel center member, which can be mounted on a vehicle.

Normal occupant weight—This means 68 kilograms (150 lbs.) times the number of occupants specified in the second column of Table I of 49 CFR 571.110.

Occupant distribution—The distribution of occupants in a vehicle as specified in the third column of Table I of 49 CFR 571.110.

Open splice—Any parting at any junction of tread, sidewall, or innerliner that extends to cord material.

Outer diameter—The overall diameter of an inflated new tire.

Overall width—The linear distance between the exteriors of the sidewalls of an inflated tire, including elevations due to labeling, decorations, or protective bands or ribs.

Pin Weight—The vertical trailer load supported by the king pin of a fifth wheel hitch.

Ply—A layer of rubber-coated parallel cords.

Ply separation—A parting of rubber compound between adjacent plies.

Pneumatic tire—A mechanical device made of rubber, chemicals, fabric and steel or other materials, that, when mounted on an automotive wheel, provides the traction and contains the gas or fluid that sustains the load.

Production options weight—The combined weight of those installed regular production options weighing over 2.3 kilograms (5 lbs.) in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim.

Radial ply tire—A pneumatic tire in which the ply cords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread.

Recommended inflation pressure—This is the inflation pressure provided by the vehicle manufacturer on the Tire Information label and on the Certification/ VIN tag.

Reinforced tire—A tire designed to operate at higher loads and at higher inflation pressures than the corresponding standard tire.

Rim—A metal support for a tire or a tire and tube assembly upon which the tire beads are seated.

Rim diameter—This means the nominal diameter of the bead seat.

Rim size designation—This means the rim diameter and width.

Rim type designation—This means the industry of manufacturer's designation for a rim by style or code.

Rim width—This means the nominal distance between rim flanges.

Section width—The linear distance between the exteriors of the sidewalls of an inflated tire, excluding elevations due to labeling, decoration, or protective bands.

Sidewall—That portion of a tire between the tread and bead.

Sidewall separation—The parting of the rubber compound from the cord material in the sidewall.

Test rim—The rim on which a tire is fitted for testing, and may be any rim listed as appropriate for use with that tire.

Tread—That portion of a tire that comes into contact with the road.

Tread rib—A tread section running circumferentially around a tire.

Tread separation—Pulling away of the tread from the tire carcass.

Treadwear indicators (TWI)—The projections within the principal grooves designed to give a visual indication of the degrees of wear of the tread.

Vehicle capacity weight—The rated cargo and luggage load plus 68 kilograms (150 lbs.) times the vehicle's designated seating capacity.

Vehicle maximum load on the tire—The load on an individual tire that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two.

Vehicle normal load on the tire—The load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table I of CFR 49 571.110) and dividing by 2.

Weather side—The surface area of the rim not covered by the inflated tire.

Wheel center member—In the case of a non-pneumatic tire assembly incorporating a wheel, a mechanical device which attached, either integrally or separably, to the non-pneumatic rim and provides the connection between the non-pneumatic rim and the vehicle; or, in the case of a non-pneumatic tire assembly not incorporating a wheel, a mechanical device which attaches, either integrally or separably, to the non-pneumatic tire and provides the connection between tire and the vehicle.

TIRE PRESSURE

Correct tire inflation pressure is essential to maximizing the life of the tires and assuring the safety of the vehicle and its occupants. Driving with tires that are not correctly inflated for the load of the motorhome is dangerous and may cause premature wear, tire damage, and/or loss of control of the motorhome.

An underinflated tire will build up excessive heat that may actually approach the vulcanization temperature of the rubber and lead to tread separation and/or disintegration of the tire.

Underinflated tires will also cause poor handling of the motorhome, rapid and/or irregular tire wear, and an increase in rolling resistance of the motorhome which, in turn, produces a decrease in fuel economy of operation.

An overinflated tire will reduce the tire's "footprint" (i.e., its actual contact with the road); thus, reducing the traction, braking capacity, and handling of the motorhome. A tire that is over-inflated for the load that it is carrying will also contribute to a harsh ride, uneven tire wear, and the tire itself will be more susceptible to impact damage.

Maintaining correct tire pressure for each loaded wheel position on the motorhome is critically important and must be a part of regular vehicle maintenance.

Tire Maximum Load Rating

Federal law requires that the maximum load rating be molded into the sidewall of the tire. If you look at a tire sidewall, you may see some "typical" information, such as:

Max. Load Single 3640 Lbs at 85 psi cold

Max. Load Dual 3415 Lbs at 85 psi cold

The maximum load allowed for the size tire and load rating and the minimum cold air-inflation pressure needed to carry that stated maximum load are noted on the tire. Using less air pressure would reduce the load-carrying capacity of the tire.

The amount of air pressure you need depends on the weight of the fully loaded motorhome. You cannot determine the correct air-inflation pressure, unless you know the actual weights of the motorhome.

Weighing the Motorhome

Earlier, in Chapter 1, the procedures for weighing the motorhome were presented. These procedures provided the weighing of a "non-loaded" (i.e., not stocked with the possessions and provisions the user would normally have onboard for travel) motorhome. Obviously, any additional weight stored onboard (inside and underneath) the motorhome will contribute to the overall weight of the motorhome.

If not stored uniformly throughout the motorhome, additional weight of the possessions and provisions of the motorhome user will load each axle and each tire differently (front-to-rear and side-to-side distribution of that additional weight). Accordingly, **it is necessary to weigh the motorhome fully loaded as the user would have it for travel**. Moreover, **it is necessary to weigh each tire position individually**.

Overloading the motorhome can produce problems with the tires, wheels, springs, brakes, drive train, and other motorhome assemblies. In addition, an overloaded motorhome uses more fuel, is more difficult to handle properly, and can lead to driver fatigue more quickly. In a worst-case condition, if any component should fail, this could result in loss of control of the motorhome and subsequent damage.

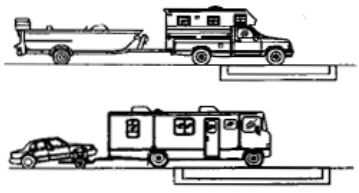
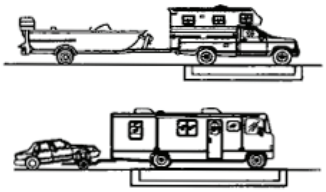
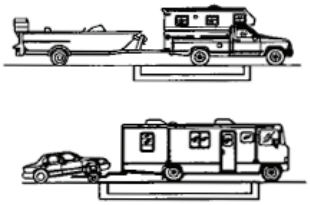
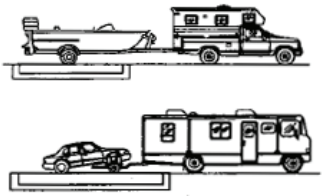
In certain states, the Highway Patrol routinely weighs motorhomes to check for overloaded axle weights. Therefore, there are many good reasons for assuring that the motorhome is properly loaded and not overloaded—this can be accomplished through a proper
weighing of the fully loaded motorhome.

You can find various places that have certified public scales where your motorhome can be weighed. For example, moving and storage company lots, farm suppliers with grain elevators, gravel pits, recycling companies, and large-scale commercial-truck stops are some of the possible locations for weighing the motorhome. You can also check the Yellow Pages of the telephone book for "scales – public" or "weighers" to determine other locations for weighing the motorhome.

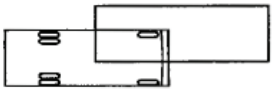
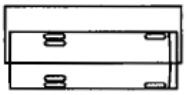
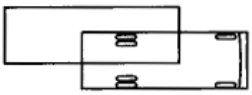
A brief overview of the procedure for weighing the motorhome is shown below.

WEIGHING YOUR SINGLE AXLE RECREATIONAL VEHICLE

RV: To Obtain Individual Axle and Gross Vehicle Weights:

	STEP 1a	STEP 1b	STEP 1c	STEP 1d
				
Scale Weight	_____ lbs. (Step 1a = GAW)	_____ lbs. (Step 1b = GVW)	_____ lbs. (Step 1c = GAW)	_____ lbs. (Step 1d)
From Owner's Manual	_____ lbs. GAWR	_____ lbs. GVWR	_____ lbs. GAWR	_____ lbs. Vehicle Weight (GCWR–GVW)

To Obtain Individual Wheel Position Weights:

	STEP 2a	STEP 2b	STEP 2c
			
One Side Scale Weight	_____ lbs. (Step 2a)	_____ lbs. (Step 2b)	_____ lbs. (Step 2c)
Calculate Other Side Weight	_____ lbs. (Step 1a–2a)	_____ lbs. (Step 1b–2b)	_____ lbs. (Step 1c–2c)
Tire Load (lbs.)	_____ lbs. (See Note #1)		_____ lbs. (See Notes #1 & 2)
Inflation	_____ psi (See Note #1)		_____ psi (See Note #1)

Note 1: From the tire manufacturer's load and inflation tables or the sidewall of the tires mounted on the motor home.

Note 2: If the motor home has duals, read dual capacity from the tire and multiply by 2 (two) to obtain dual-assembly load-carrying capacity.

More detailed information can be found in the manufacturer's literature associated with the chassis and/or the tires provided with the motorhome. For example, the attached illustrates the inflation pressures for Michelin tires as a function of the loads per position for a specified speed of the motorhome. You can determine the appropriate inflation pressures for each of the tires on the motor home, as a function of the loads they are to carry on a trip. Whenever there is a significant change in the loading regimen of the motorhome, it would be wise to re-calculate the load weights of the tires to assure optimal use of the motorhome.

Frequency of Checking Tire Inflation Pressures

When you have determined the "correct" tire inflation pressures for each of the motorhome tires and inflated the tires under "cold" conditions, meaning the tires haven't been driven for more than one mile, then the air pressures in the tires should be periodically checked to make sure that they retain their proper pressures. It is recommended that tire pressures be checked at least once a month, or preferably, every two weeks, and before any major trip.

On long trips, the tires should be checked every "drive" morning. On short trips (a day or less), the tires should be checked before one departs on the trip and again before one returns home.

Check tire pressures when they are "cold"; that is, the tires haven't been driven at all or, at most, less than one mile before being measured. In this manner, the tire pressure has not been increased by the heating associated with tire sidewall and tread flexure associated with traveling. If you check tires that are warm or hot, remember that they will necessarily read higher than normal. Do not "bleed" these tires down to the "cold pressure" readings, as they will probably then be underinflated when they are actually cool.

Don't make any adjustments to tire pressures when the tires are warm or hot, if such can be avoided. To make these tire-pressure measurements, it is recommended that you purchase a high-quality, truck-tire air gauge which has an angled dual head. This type of gauge allows you to check inflation pressures of both the inner dual wheel which has the valve stem pointing towards one and on the outer wheel which has the valve stem pointing away from one. Pressure-sealing valve caps should always be used to protect the valve

Figure 16-4: Rear tire

Figure 16-5: Front tire

stems and prevent air from escaping from the valve stems.

Tire Wear, Balance, and Wheel Alignment

In addition to tire inflation considerations, the tires should also be periodically examined for other types of normal "wear and tear." If installed and maintained properly, all tires mounted on the motor home should wear in a smooth, even pattern. If the tires begin to show irregular wear patterns and the motor home alignment is still correct, then sometimes just rotating the tires by changing wheel position and rotation of the tires will allow the tires to wear evenly.

Check with the chassis manufacturer (Power Glide) and its literature in the Owner's Information Package for particulars on maintaining proper wheel alignment.

Tire Cleaning

Proper cleaning of the tires will assure maximum years of service. A soft brush and the normal mild soap should be used to clean the tires. Use care in applying any tire "dressing" product as these contain petroleum derivatives, alcohol, or silicones which may cause deterioration of the rubber, possibly leading to cracking, and accelerate the aging process. In many instances it isn't the actual dressing itself, but the reaction of that product with the antioxidant in the tire. Heat can compound this problem also.

INTERIOR CARE

NOTICE

The fading of upholstery, carpet, and other interior fabrics is generally caused by excessive sunlight. The drapes, blinds, or other shades should be kept closed when the vehicle is parked for an extended period of time to minimize the fading. Normal deterioration of the appearance of such items caused by wear and/or exposure to strong lighting is not covered by the Tiffin Motorhomes Limited Warranty.

Carpet

A weekly routine of vacuuming the carpet and fabrics throughout the vehicle is recommended. The optional vacuum system has a central connection within the motorhome wherein a vacuum hose can be connected and the necessary vacuuming performed, as desired.

Remember to empty or replace vacuum bags before they become overly full—this practice will assure that sufficient vacuuming capability is readily available to handle any and all cleaning situations that may arise. In carpet areas that receive the most sunlight, keeping the curtains closed whenever possible will minimize fading. Also, act quickly when anything is spilled or dropped onto the carpet to prevent or minimize staining.

To connect the cleaning hose, raise the wall remote inlet valve door and align hose end coupling with slots on each side of intake opening. Firmly push into intake opening. Make sure hose end coupling is connected and is locked in place. To disconnect the hose, simply push in the slots on each side of the hose coupling and pull hose end straight out.

NOTE: The vacuum cleaner hose must be plugged into outlet to activate the vacuum motor.

To start the vacuum cleaner:

1. Lift inlet valve cover on the wall.
2. Insert the hose cuff with a twist and push. The vacuum cleaner will start automatically.
3. To remove, turn hose in either direction while pulling hose towards you.

To change the dust bag you will need to open the door on the vacuum cleaner by pushing the latch upward and remove the door completely. Remove the full bag and discard. Next, locate the pipe inside the vacuum chamber. Holding the new bag's cardboard collar at approximately a 45-degree

WARNING

This appliance has a THERMAL PROTECTOR built in the motor to prevent overheating. If motor will not operate or shuts down while in operation wait 30 minutes; it will reset automatically. Turn unit off while it resets. If the motor does not come on, or Thermal Protector trips off again after a short period, service may be needed. A qualified service technician should perform service.

angle, insert the cardboard part of the bag against the upper back of the vacuum cleaner chamber behind the pipe. Lift the front of the collar over the pipe as far as possible. When closing the door, tuck in the left and right corners of the bag so the door is properly sealed and the latch clicks into place.

The vacuum cleaning system comes with an array of attachments that can be connected to the hose ends for extensive cleaning purposes. Make sure they are firmly pushed in and twist to hold in place.

For further instructions to change the dust bag, use the attachments, and proper cleaning technique, refer to the specific Owner's Manual located in your motorhome.

FABRICS

Figure 16-6: Furniture fabrics

The fabrics used in this Tiffin motorhome for the bedspread, draperies, headboard, and valances contain fire-retardant additives that may be damaged by use of improper cleaning products. Cleaning instructions for these items are DRY CLEAN ONLY. Water-based products are not recommended for cleaning the fabrics in your new vehicle. Most water-based, household-cleaning products are not formulated for use on these fabrics and may cause excessive shrinkage or fading. For best results, the fabrics in this vehicle should be cleaned by a professional carpet and upholstery cleaner.

Spills, spots, or stains should be treated as soon as possible

to avoid permanent damage to the fabrics. If a spill occurs, blot the fluid with a dry towel, do not rub the spill as rubbing may cause the liquid to "set" in the fabric and cause a stain. When attempting to clean a spot or stain, always start from the outside and work inward to avoid spreading the stain further. Some stains or soils are extremely difficult or impossible to be removed completely. These stains should receive immediate, professional attention. Spills, spots, stains, or soiled areas are the responsibility of the owner and are not covered by Tiffin Motorhomes Limited Warranty.

Figure 16-7: Bedroom fabrics

WARNING

When cleaning the upholstery and fabric of the motorhome, do not use lacquer thinner, nail polish remover, laundry soaps, or bleach. Never use carbon tetrachloride or gasoline for cleaning purposes. These substances may cause damage to the materials being cleaned and most are highly flammable.

WALLS & CEILING

The wall and ceiling coverings should be cleaned periodically to maintain a new appearance. Use a non-abrasive cleaner with a soft cloth on the walls. Do not use solvents of any kind, as those solvents may damage the surfaces being cleaned.

DASHBOARD

To keep the motorhome dashboard in like-new condition, regularly follow these guidelines:

DO:

- Dust and clean the dashboard with a soft, damp cloth or chamois, wiping the service gently.
- Use a mild detergent and lukewarm water.
- After washing and rinsing the dashboard, dry it by blotting with a damp cloth or chamois.

DO NOT:

- Use harsh chemicals that may damage the dashboard.
- Use cloths containing grit or abrasive particles or kitchen-scouring compounds to clean or dust the dashboard.
- Subject the dashboard to hard, direct blows.
- Use boiling water, strong solvents, or other such materials to clean the dashboard as they will soften the plastic.

WOODWORK & FLOORS

The wood cabinetry should be cared for with furniture polish to sustain the natural beauty and luster of the wood. This procedure will also keep the cabinetry looking new, prevent the wood from drying, and reduce chances of accidental staining or aging.

Figure 16-8: Kitchen cabinetry

Use area rugs and floor mats by the entrance door to trap dirt.

Use soap and water to clean the flooring, begin by vacuuming the floor to remove loose dust and dirt. Then, damp mop the floor with a cleaning solution consisting of any standard cleaning solution. The mop should be damp, but not dripping. Feel free to use soap-based cleaners, scouring powders, steel wool, abrasive cleaners, wax, or polish on the ceramic floor as this floor is impervious to these cleaning agents.

To remove stubborn spots like shoe polish, oil, tar, markers, scuffs, and the like, use a household solvent or nail-polish remover on those spots then wipe those treated areas with a damp cloth.

To remove chocolate, grease, juice, or wine, use warm water and any off-the-shelf abrasive cleaner.

To remove candle wax or chewing gum, carefully scrape off when the material has hardened. For further tips, please see the manufacturer's information sheet in your TiffinMotorhomes Owners Information Package.

COUNTERTOPS

To care properly for the countertops in your new vehicle, always use a heat pad or trivet to protect the surface from hot objects that may mar or damage the countertop surface. Hot pans and heat-producing appliances (such as electric skillets), when set directly on top of the countertop, can possibly mar the beauty and finish of the product.

Additionally, since heat-producing appliances can also damage countertop seams, it is essential to check with Tiffin Motorhomes to identify seam locations to avoid them during subsequent use of the motorhome. Although solidsurfacing is repaired easily, certain steps should be taken to protect it.

Figure 16-9: Kitchen countertops

Be sure to use a cutting board, rather than cutting directly on the countertop surfaces. Although minor scratches and cuts can be repaired, a little care will assure that the countertop surfaces will keep looking new for years.

Avoid using harsh chemicals on the countertop. Wipe the countertop with a damp cloth to remove water spots. For mostdirt and stains, wipe with a damp cloth and use soapy water or ammonia-based cleaners (e.g., Windex). If a stain doesn't respond to soap and water, for a matte finish, apply an abrasive cleanser and buff it with a Scotch-Brite pad, using a circular motion. Use the same technique in the case of a cigarette burn. If the finish is a gloss finish, please contact the dealer for specific cleaning instructions.

Do not expose the surface to harsh chemicals, such as paint remover, turpentine, nail polish remover, or any stove and drain cleansers. If these chemicals should come into contact with the countertop surfaces, immediately wash off these chemicals, using appropriate safety measures to avoid injury.

In the event of subsequent staining or spotting, sand the affected surface lightly with fine sandpaper (400 grit or finer), then buff in a circular motion with a Scotch-Brite pad.

ACCESSORIES

The metallic light fixtures, bath accessories, and faucets can be cleaned by wiping with a soft, damp cloth. Washing with warm water will remove dry water spots. Polishing those fixtures with a soft cloth will also enhance their appearance. Do not use cleaners that contain harsh or abrasive chemicals. Alcohol or other similar solvents should never be used.

DETECTORS

The CO/LP gas detectors are self-contained and DO NOT require any maintenance other than normal cleaning and periodic testing. The smoke detector installed in the motorhome is a nine-volt, battery-operated detector. The CO/LP gas detector is wired directly to the house batteries.

Figure 16-10: Smoke detector

The batteries in the smoke detector need to be tested periodically and replaced when necessary. When cleaning the case on any of the detectors, use a damp cloth or paper towel. Do not spray cleaners or wax directly into the case as this action may cause false alarms or hinder the normal operation of the detectors.

An inexpensive battery tester would be a good investment to make. This tester would allow checking of the batteries in the various alarms, any flashlights used in the motorhome, and batteries in other appliances which may be in the motorhome during travels.

CONDENSATION

NOTICE

Since surface condensation within the motorhome cannot be controlled by the manufacturer, damage caused by condensation is not covered by the Tiffin Motorhomes Limited Warranty.

Damage may occur to your vehicle if excessive condensation exists. Accumulation of condensation on surfaces within your motorhome occurs when warm, moist air contacts a cool surface. It is most evident on the inside of windows, but this problem can be controlled by:

1. Slightly opening a window or roof vent to allow the moisture to escape from the motor home.
2. A small dehumidifier is also very effective in removing moisture from the air.

Condensation levels are highest during times when a person is cooking or taking a shower in the motorhome, but these occasions are not the only times condensation is present. Walls and ceiling panels may become wet when the moisture accumulates on these surfaces. Tiffin Motorhomes does not recommend the use of any catalytic heaters because of resulting extensive condensation.

ROUTINE MAINTENANCE SCHEDULES

NOTICE

Always follow the chassis maintenance guidelines found in the chassis manufacturer's owner's manual.

All routine maintenance is the responsibility of the owner and is not covered by the Tiffin Motorhomes Limited Warranty. Use the maintenance record found in Chapter 15 to record all performed maintenance as required.

Please note that any damage caused by improper or unperformed maintenance is not covered by the Tiffin Motorhomes Limited Warranty. Items supplied by other manufacturers may require specific individual maintenance not listed herein. Please refer to the manufacturers' suggested maintenance guidelines in the Owners Information Package.

NOTICE

Cosmetic adjustments and alignments must be performed within the first three months from date of original purchase for warranty consideration. Thereafter, these items are considered routine maintenance.

Monthly

- Check the water levels of the batteries.

Every Three Months

- Check LP gas lines for leaks with soap solution or leak detector.
- Clean the microwave hood exhaust fan filter and blades.
- Test smoke alarm and carbon monoxide/LP gas detector.
- Check operation of windows, latches, and hinges.
- Clean the roof ducted air conditioner filter or filters.
- Clean and inspect door and window seals; reseal where necessary.
- Inspect and reseal around the tub and shower area where necessary.
- Lubricate the exterior door hinges and latches with a graphite (silicone) lubricant.
- Check, clean, and tighten battery cables and inspect batteries for proper fluid levels.

Every Six Months

- Inspect the slide-out for proper seal. If realignment is necessary, please contact an authorized Tiffin Motorhomes Service Center.
- Inspect the exterior rubber slide-out seals and apply an UV inhibitor, such as 303 Pro tectant.
- Change the battery in the smoke detector.
- Rotate tires as recommended by the tire manufacturer.
- Check all gas appliances for proper operation.
- Have the LP system inspected by a qualified technician.
- Lubricate the movable parts on the entrance step.
- Change the batteries in both the smoke detector.
- For the optional washer/dryer, inspect the water hoses (both the hot and cold supply lines) to note any bulges, kinks, cuts, wear, or leaks. Especially note the hot-water hose, as this tends to degrade faster than the cold-water hose. Replace if hose feels “soft” or “spongy.”

Annually

- Inspection of roof seams and joints should be performed by an authorized Motorhomes Service Center. If resealing is necessary, it is the owner’s responsibility and is not covered by the Tiffin Motorhomes Limited Warranty.
- Sanitize the fresh water system.
- Wax and buff all gel-coat surfaces on the vehicle as described previously in this chapter.

WINTERIZING

To store your vehicle for the winter months, it is necessary to winterize the water system to help prevent freezing of this system. To do this, follow these instructions:

1. Drain all the water from the water system including the holding tank(s), the hot water heater, and freshwater tank. Also drain the water filter. For the holding tank(s), open the gate valve(s) to drain the tanks. Turn off water heater before draining to prevent burning element out. (NOTE: **This procedure is to be performed only at a waste water pumping station** to prevent dumping of contaminated water elsewhere). For the hot water heater, remove the outside cover and then remove the drain plug. When this tank is drained, replace the drain plug and then replace the cover. For the water tank, open the red-handled valve to drain the tank; then close the valve. Remove the filter cartridge from the water filter and store it in a clean environment. Empty any excess water from the filter housing and replace the housing.

2. Turn the by-pass valve located in the exterior sanitation compartment to the "by-pass" position to prevent filling the water heater tank with antifreeze.

3. Disconnect the inlet connection to the water pump located in the sanitary service compartment under the motorhome. Attach the supplied, vinyl hose (via the plastic coupling on the hose) to the inlet connection and hand-tighten that connection. Do not over-tighten.

4. Place the other end of the hose into a gallon of freshwater system antifreeze (one can refer to the local Tiffin Motorhomes dealer or representative for the freshwater antifreeze formulation for your specific area). NOTE: Do not use automotive antifreeze; use only antifreeze approved for RV applications. Otherwise, damage to the systems being protected may result.

5. Turn "on" the water pump to start the flow of antifreeze. Turn "on" each faucet, one at a time and allow pure antifreeze to run through that piping. Let about one cup drop into the drains to protect the traps.

6. When all the antifreeze is withdrawn from the bottle, disconnect the clear vinyl hose from the water-pump inlet connection and reconnect the inlet line to the water pump. (This may require more than one gallon of antifreeze).

7. When the winterizing process is completed, turn the water pump "off" and then reconnect the water line. Store the vinyl hose for future use.

8. Open the water supply valve that controls flow from the pump to the tank to help prevent freezing on that water line.

Note: Remember, the motorhome also has an exterior shower; therefore, this system must be winterized, as well.

If the motorhome is equipped with an optional ice maker, the following additional steps should be taken:

Dometic Refrigerator Ice Maker (optional)

1. Shut off the water supply to the ice maker.

2. Place a shallow pan under the water solenoid valve.

3. Remove the inlet fitting to the ice-maker water solenoid valve. Then drain the water from the supply line.

4. Remove the plastic nut and water line from the outlet side of the water solenoid valve. Then drain the water from that line. Note: Do not lose the metal insert from the plastic water line. One recommended way to secure this insert is to place it into a "zip lock" bag, seal the bag, punch a small hole through the top of the bag above the zip-lock, insert any type of "twist-tie" through the hole, and then secure that bag to the outlet line for safekeeping.

5. Connect a source of compressed air (up to 20 psig, maximum) onto the inlet fitting of the water solenoid valve. Apply AC power to the solenoid valve for forcing the ice-maker mold assembly through several harvest cycles.

6. Remove the plastic cover from the mold assembly. The bail arm must be in the "down" (or "on") position.

7. Start the harvest cycle with a flat-blade screwdriver inserted into the center of the small gear.

8. Turn the gear counterclockwise (CCW), when the hold switch closes, the mold assembly will continue to operate through the harvest cycle. During the water-fill sequence of the harvest cycle, the compressed air will blow out the water trapped in the solenoid valve.

9. Repeat the harvest cycle operation (i.e., steps 7 and 8) several times. Note: Damage to the solenoid valve can occur if the AC power is applied for more than 20 seconds.

10. Reconnect and tighten the lines on the water solenoid valve. The metal insert must be installed in the plastic water line going to the outlet side of the water solenoid. Leave the water supply turned "off" until temperatures are above 0° F (-18° C).

11. Dry out the ice-maker mold assembly with a soft cloth. Place the bail arm in the "up" ("off') position.

If the motorhome is equipped with an optional ice maker, the following additional steps should be taken:

Whirlpool Residential Refrigerator Ice Maker (optional)

1. Unplug refrigerator or disconnect power.

2. Locate the water supply shut off valve and turn off the water supply.

3. Disconnect the water supply line at the refrigerator and drain supply line completely.

4. Locate ice maker fill tube at the rear of the refrigerator and follow the water line down to the water valve.

5. Remove any covers if necessary.

6. Disconnect water line from water valve and drain water from line and valve. Use a small pan to catch water.

7. Remove water filter cartridge (if applicable.) NOTE: Reinstall a new water filter cartridge when refrigerator is put back into service.

DE-WINTERIZING

1. To de-winterize your vehicle, open both of the low-point drains to allow the antifreeze solution to drain from the water system.

2. Next, close the low-point drains and connect your vehicle to the city water system. Put water in the freshwater tank and pump at least one gallon through the water pump to re move the antifreeze from the water pump. Keep the water heater in the bypass mode.

3. As in winterizing, open the kitchen faucet, bath faucet, inside and outside showers, turning "on" both the hot- and the cold-water valves and flushing the stool until the antifreeze solu tion is flushed out of the system and the water flow is clear.

4. Once the system has been flushed, open the water heater bypass valve. Open the freshwater tank supply valve from the pump and the icemaker valve.

5. Reinstall the (optional) water filter. Fill the water heater and hot water lines before turning the water heater on.

6. Be sure to close the fresh water tank drain valves to allow the tank to fill.

ALLEGRO Breeze

MAINTENANCE & DATA CHARTS

Chapter

17

RV OWNER'S DATA SHEET

Please enter the following information in the table for your future use:

Allegro Breeze: Year: _____ Model #_____ Tiffin Serial # _____

Appliance	Brand	Model No.	Serial No.
Refrigerator			
Water heater			
Microwave			
Inverter/Converter			
Television, Front			
Back up monitor			
Stereo/CD			
DVD home theater			
Air conditioner			
Generator			

Reproduction Master – Copy this sheet and use copy to maintain your maintenance records. You may wish to keep the completed sheets in a three-ring binder for your permanent record.

RV OWNER'S MAINTENANCE RECORD

Please enter the following information in the table for your future use:

Allegro Breeze: Year: _____ Model #_____ Tiffin Serial # _____

Date/Mileage	Work Performed	Performed by	Cost ($)

Reproduction Master – Copy this sheet and use copy to maintain your maintenance records. You may wish to keep the completed sheets in a three-ring binder for your permanent record.

RV OWNER'S MAINTENANCE RECORD

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Allegro Breeze: Year: _____ Model #_____ Tiffin Serial # _____

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